

THE AMERICAN PSYCHOLOGIST

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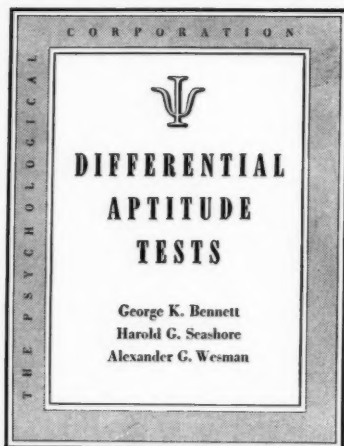
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THE AMERICAN PSYCHOLOGIST

The Professional Journal of the American Psychological Association, Inc.

Volume 2

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Editor: HERBERT S. LANGFELD, *Princeton University*. Contains original contributions of a theoretical nature; bi-monthly. Subscription: \$5.50 (Foreign \$5.75). Single copies, \$1.00.

PROCEEDINGS OF THE THIRTY-NINTH ANNUAL MEETING OF THE SOUTHERN SOCIETY FOR PHILOSOPHY AND PSYCHOLOGY

JOSEPH WEITZ, *Secretary*

Newcomb College, Tulane University

THE Southern Society for Philosophy and Psychology held its Thirty-ninth Annual Meeting at St. Louis, Missouri, April 3 to 5, 1947. Washington University was the host institution. All meetings were held in the Chase Hotel. Arrangements for the meetings were made by Dr. John Paul Nafe. The program committee consisted of Lewis O. Kattsoff, John P. Nafe, R. L. Patterson, S. Rains Wallace, and Joseph Weitz, Chairman.

The Council of the Society, presided over by Dr. Peter A. Carmichael, met the evening of April 3. Council members present were Meredith Crawford, Elizabeth Duffy, Frank A. Geldard, Harold N. Lee, Katharine Omwake, Herbert C. Sanborn, and Joseph Weitz.

Two sessions in psychology and two sessions in philosophy were held on Friday. On Saturday morning there was a joint session of philosophy and psychology. Chairmen of the psychology sessions were Frank A. Geldard and John P. Nafe. Chairmen of the philosophy sessions were William Weedon and Harold N. Lee. Chairman of the joint session was Peter A. Carmichael.

At four o'clock on Friday afternoon, members of the Society were entertained by Dr. Meltzer and members of the staff of Washington University.

The annual banquet of the Society was held Friday evening at seven o'clock at the Chase Hotel. Dr. Peter A. Carmichael delivered the presidential address, entitled "The Limits of Method."

The annual business meeting convened at eleven o'clock Saturday morning. Dr. Peter A. Carmichael presided.

MINUTES OF THE ANNUAL BUSINESS MEETING

President Carmichael called the meeting to order. The minutes of the Thirty-eighth Annual Business Meeting were approved as published in the *AMERICAN PSYCHOLOGIST*, 1946, 1, 438-447.

The report of the secretary was read and approved. The report contained an account of the activities of the Secretary's office since the last meeting of the Society.

It was reported that during the last year two members of the Society had died. These were Dr. Gillentine and Dr. Ross. Two members withdrew from the Society, Dr. Wendt and Dr. Edds. The total number of members at the time of the Thirty-Ninth Annual Meeting was 265.

The report of the Treasurer was read and approved. The balance in the treasury as of April 1, 1947, was reported as \$1,569.03.

Dr. Balz presented a report from the Standing Committee on Philosophy. He stated that it was possible that the committee might need an additional one hundred dollars for completion of the work, and further suggested that the results of the committee might be published. Dr. Sanborn moved that an additional one hundred dollars be granted this committee. The motion was seconded and passed.

On the recommendation of the Council, five new associate members were admitted to the Society and eighteen members. The associate members are: Harold Edwin Masengill, Jr., Morley Mays, Arthur DeWitt Ripley, Rosamond Kent Sprague, and A. Lee Wheeler. The full members are: Warren Ashby, Robert Poindexter Barrell, Emmoran Benjamin Cobb, Charles Norval Cofer, Philip Hunter DuBois, William Franklin Dukes, Elizabeth Fehrer, Frank Prentice Gatling, Robert Moore Hughes, Margaret Ruffin Hyde, Sidney Janus, Adrienne Koch, Karl David Kryter, Hamilton Mark Moody, Marguerite (Ekdahl) Topper, Robert Carlton Topper, William Gatewood Workman, and Philip Worchel.

Upon recommendation of the Council, Dr. B. von Haller Gilmer was unanimously elected President of

the Society and Dr. William S. Weedon and Dr. S. Rains Wallace were elected to the Council.

Upon recommendation of the Council, the members voted to have the next annual meeting at Atlanta, Georgia.

The members had been polled as to the desirability of holding the meetings at some time other than Easter. Of those returning ballots, 111 preferred to have the meetings at Easter, 18 gave no preference, 43 gave no answer, and 14 wanted the meetings at some time other than Easter.

The Secretary announced that the Treasurer has been instructed to waive the payment of dues of any member who has retired from active professional duty.

Upon motion of Dr. H. N. Lee the Society went on record as extending its thanks to Washington University, and especially to Dr. John P. Nafe, Dr. Meltzer, and the Chase Hotel for their hospitality.

The meeting was then adjourned.

PROGRAM

Friday Morning Session, April 4, 1947

PSYCHOLOGY

FRANK A. GELDARD, *Chairman*

Additional Data on Correlation Interpretation.

Henry F. Dickenson, Lincoln Memorial University.

By means of a new coin dropping device, 44,429 cases of evidence have been amassed invalidating certain assumptions regarding the interpretation of the correlation coefficient.

Is There a Dichotomy in Energy Mobilization?

Elizabeth Duffy, The Woman's College of the University of N. C.

In psychology there appears to have grown up the curious assumption—not explicitly stated in these terms—that the individual functions at two distinct levels of energy mobilization, one the energy level of emotion, and the other the energy level of non-emotional conditions. The writer has repeatedly protested the dichotomizing of "emotion" and "non-emotion," and has suggested that the phenomena of emotion occur in a continuum, or rather in a number of continua.

Data will be presented, from experiments conducted in collaboration with Dr. Oliver L. Lacey, to show that energy mobilization (as indicated by palmar skin conductance) is finely adjusted to the

requirements of the situation, varying with the nature of the task, the degree of adaptation to the task, and the individual performing the task. The phenomena observed are more in harmony with a theory of continuous variations in energy mobilization than with a theory of a dichotomy between the energy mobilization of "emotion" and that of "non-emotion."

"Facial Vision": The Perception of Obstacles by the Deaf-Blind. *P. Worchel, Tulane University and K. M. Dallenbach, Cornell University.*

In order to resolve the many contradictions in the interpretation of the cues utilized by the blind in avoiding obstacles Supa, Cotzin, Dallenbach, in 1940, performed a series of seven experiments on two blind and two sighted subjects. Since their subjects failed to perceive the obstacle only when both ears were plugged, they concluded that aural cues were necessary and sufficient for the perception.

The present study attempts to determine whether the aural mechanisms which were shown to serve as the cues for the perception of obstacles are auditory or cutaneous sensations from the external ear.

Ten deaf-blind subjects whose deafness was of internal origin and thus whose auditory meatuses and tympanums were functional were brought to the laboratory. With few exceptions, conditions duplicated those in the previous investigation. Results indicated that such "successes" as occurred were, as the mathematical treatment of the data reveals, due to chance. Analysis of the individual performances supported the "chance" hypothesis.

The conclusion that pressure sensations from the auditory meatus and tympanic membrane are not necessary and sufficient conditions for obstacle perception seems justified.

A Simple Circuit for the Measurement of the Galvanic Skin Response and of the Level of Galvanic Skin Resistance. *Oliver L. Lacey and Paul S. Siegel, University of Alabama.*

A simple instrument for the measurement of skin resistance under the desirable condition of constant current for all subjects will be described. The circuit employed in the apparatus is essentially a voltage divider by means of which the potential drop across the subject is adjusted to produce a standard current. The subject's resistance is then readily computed by Ohm's Law.

The instrument has been found satisfactory in practice both for class demonstration and for research purposes.

The Pattern of Convulsive Behavior in Albino Rats under Metrazol Injection. Cecil W. Mann, Tulane University of Louisiana.

Using metrazol dosage, interperitoneally, sufficient to produce convulsions, comparisons were made between the behavior of rats in a control group and rats with small amounts of cerebral extirpation. In both groups there was a fairly definite pattern of behavior. In the experimental group there was delay in the onset of convulsive spasm, secondary spasms were more marked and the pattern was extended over a longer period.

The Concept of the Psychopath. Hulsey Cason, U.S. Public Health Service, Springfield, Mo.

The concept of psychopathic personality has been widely used in the United States and in Europe, and the psychopath is generally recognized as a critical problem. The problem, however, has continued to be somewhat elusive. In the present paper we shall attempt to describe the psychopath in connection with primitive drives, antisocial modes of behavior, and the control of primitive antisocial behavior. Psychopathic personality may be defined as a personality reaction type and a functional condition of the individual in which there is a serious lack of ability to control several of the primitive drives and antisocial modes of behavior. When a person cannot control some of his primitive antisocial modes of behavior, he may be said to be psychopathic with respect to these modes of behavior. Being psychopathic does not depend upon the absolute strength of the primitive antisocial tendency or upon the absolute strength of the acquired control, but upon the relative strength of the primitive antisocial tendency and the control. The psychopath may be conceived and described as a natural, human, and fairly easily recognizable type of person.

The Effects of Maze Rotation on Learning. Maurice Curtis Langhorne, Emory University.

102 college students, 68 men and 34 girls, learned to two perfect trials the lower part of the Miles Two-story maze. All subjects learned the original or 0° position and then were assigned to groups. The assignment followed no selective principle. The first group learned the maze in four additional posi-

tions on successive days with a 90° counter-clockwise rotation each day; the second group learned only the 90° position 24 hours later; the third group repeated the original position after 24 hours; the fourth repeated the original position after a four day interval. Trials, time, errors were measured. Data are presented in three ways: the absolute differences between men and girls for the original position; the mean per cent of gain for each group for each position; the per cent of gain for each individual for each change. The men learned the original position with greater ease than the girls, the differences being significant statistically. These sex differences were not significant for the other positions. The first 90° rotation produced significant disturbances in the learning of the girls when compared with those repeating the original position after the same interval. The men were disturbed but not so greatly. Each successive change in position of the maze caused less disturbance. The four day interval between learning the 0° position and repeating it did not produce results in any way different from learning the original position and repeating it one day later.

PHILOSOPHY

HAROLD N. LEE, *Chairman*

Some Thoughts on Philosophical Style. Rosamond Kent Sprague, Bryn Mawr College.

A good style is not always considered a virtue in philosophical writing. This may be because some philosophers have confounded obscurity with profundity. But if the philosopher cannot make himself clear to his readers, his readers have the right to suspect that he may not be clear to himself. Philosophers should strive for clarity of expression even at the risk of making a difficult thing look easy. The problems of terminology, structure, and audience are the most significant in this context.

Metaphysics and Metaphor. Edward Goodwin Ballard, Tulane University of Louisiana.

In this paper I wish to say what a metaphysical proposition is. It seems that a metaphysical proposition has at least these characteristics: it is non-empirical; it is non-literal; it is "fundamental." The body of the paper will discuss these three prescriptions, especially the last. It ought to end with something like a definition of metaphysics.

Philosophy and Psychoanalysis. *Martin E. Lean, University of North Carolina.*

The phenomena of unconscious mental processes and the undeniable soundness of much of psychoanalytic theory have a relevant and important bearing on several aspects of philosophy. While the concept of unconscious symbolism and motivation cannot impugn the validity of purely logical (i.e., deductive-analytic) reasoning, it is relevant to the evaluation of ethical, social and political beliefs. It is applicable to philosophical "ways of life," or weltanschauungen—in short, to those branches of philosophical thinking where temperament and opinion are inescapable. The relevance of psychology for philosophy of religion and aesthetics has never been denied. Finally, the facts and theories of psychoanalytic psychology demand greater sophistication in our conception of scientific method and explanation. The widespread antagonism to psychoanalysis among psychologists as well as among philosophers is largely the result of a merely superficial acquaintance with the theoretical literature and clinical data.

The Subject-Matter of Cosmology. *W. S. Weedon, University of Virginia.*

Cosmology, if it is to possess a distinct viewpoint and subject-matter, must justify its existence in the face of the conflict between the positions associated with the classic "realism" and the doctrines issuing from the Kantian and neo-Kantian views on the critical limitations of "knowledge." Actually the conflict may be stated in more general terms, and the conditions for the possibility of the existence of cosmology as a separate branch of philosophy may thus be brought into direct relation with the problems of the nature of man. In terms of such a generalized statement, some account would appear possible of the "good" of cosmology; and the way would seem thereby opened for a "Platonic" definition.

Why is Philosophy off Center? *Fritz Marti, Marietta College.*

Some think little time may be left for liberal education to save the day. They fear an early success of the rebellion of the masses against the difficult obligations upon any who would be heirs to occidental culture. Mass civilization tends to be mechanical and superstitious.

Philosophy is the dissolvent of superstition and mechanism. Why can institutions dedicated to liberal education not afford to assign philosophy its central place?

It may not be entirely unrealistic to distinguish between three kinds of college students, (1) those who feel no need of a reflective center of life, and whose pragmatic cravings have twisted many a collegiate procedure into a tool of mass rebellion, (2) those who cling to the remnants of an ecclesiastic core of life, once virile and vigorous, but now effeminate and on the wane, and (3) those who implicitly feel, though they may not know explicitly that the homecoming day of their soul falls into a period which, perhaps, should be called post-Christian.

As yet there is not much evidence that colleges deliberately plan to cater to one or two of the three kinds of students and not to the third. Some colleges still seem to try the impossible reconciliation of pragmatic with Christian goals. A few seem to believe in an alleged compatibility of the trite pragmatic with the pregnant post-Christian ends. There seem to be none who realize that the Christian and the post-Christian alone are the compatible couple. Consequently no college appears to recognize fully the definite need for philosophy felt by so many students of the second and third type.

Friday Afternoon Session, April 4, 1947

PSYCHOLOGY

JOHN PAUL NAFE, *Chairman*

The Voluntary Water Intake of the Rat and Sodium Pentobarbital Induced Hemodilution. *Irving E. Alexander and Paul S. Siegel, University of Alabama.*

Forty male albino rats were employed in an experiment which measured voluntary water intake following the intraperitoneal administration of physiological saline and following the injection of a mild dose of pentobarbital sodium. A comparison of voluntary water intake after isotonic saline injection with oral intake following sodium pentobarbital injection yielded a statistically significant difference.

It was found that the sodium pentobarbital depressed drinking. An explanation is offered in terms of hemodilution.

The Relationship between Period of Water Privation, Weight Loss, and Voluntary Water Intake in the Rat. *Paul S. Siegel, University of Alabama.*

Sixty adult male rats were employed in this experiment. Oral intake of water was measured for a twenty minute period following 0, 6, 12, 24 and 48 hours of water privation. Body weight loss following these privation intervals was also examined. The two curves are presented with tentative identification of the mathematical functions.

Labor Turnover and its Correlates. *Willard A. Kerr, Tulane University.*

The relationship between labor turnover and each of twenty-five to forty-three other variables in departments of two manufacturing plants is determined. Factors studied include psychological variables such as job monotony, promotion probability, social prestige of average job, supervisory quality, sex balance, and other variables such as wages, overtime earnings, hours worked per day, accidents, and absenteeism. When forty-three of these variables were correlated with labor turnover, eleven were found to be significantly related, particularly per cent of hourly employees who are female, few hours worked per week per hourly female, low hourly earnings of hourly males, sex hours differential, low job prestige, job monotony, incentive wage system, and low morale (union rating). Some of the relationships are further clarified by technique of partial correlation. Three statistics, turnover, avoidable turnover, and avoidable separation rate, are compared and their limitations noted.

Color Vision and Camouflage Detection. *S. Rains Wallace, Life Insurance Agency Management Association.*

A Comparison of the Requisite Aptitudes for Contact and for Instrument Flying. *R. H. Henne-man, AAF Strategic Air Command.*

The increasing attention to all-weather flying in the post-war Air Forces is emphasizing increasingly the importance of instrument flying proficiency. Results bearing on this current problem in pilot selection were obtained from a field study carried out at Santa Ana, California, during the war. Extreme proficiency groups of "best" and "poorest" aviation cadets in *contact* and in *instrument* flying were selected on the basis of their flying records at

five basic flying schools. Classification "stanines" and the twenty individual tests of the battery were then compared as to their statistical discrimination between these two proficiency groups for the two types of flying training. The navigator stanine was found to predict significantly success in instrument flying, but to be essentially unrelated to contact flying proficiency. Individual test discrimination between "best" and "poorest" groups also differed markedly for the two types of flying. The apparent evidence for different aptitude patterns for success in contact and in instrument flying suggests the advisability of revising an aircrew classification battery to be used for pilot selection in the future.

Analysis of "Pilot Errors" in Operating Aircraft Controls. *Paul Fitts, Aero-Medical Laboratory.*

An extensive research program is underway to determine psychological principles and requirements that will enable engineers to design machine controls for most efficient human use. Major emphasis is given to research most likely to have application to aeronautical engineering. In planning the research program in this field, it was decided that one of the first steps would be to determine the nature and frequency of difficulties encountered by operators of present type equipment. Accordingly, an investigation was conducted into the causes of errors made by pilots in operating aircraft controls.

Accounts of actual experiences were obtained rather than statements of generalized opinions, in order to reduce the sources of bias and unreliability in the data. Three methods were employed in collecting accounts of experiences—individual recorded interviews, group recorded interviews, and written reports.

In the present paper is presented a classification of types of errors made in operating controls. The frequencies of each type, based upon preliminary results, are reported. Implications of the findings for a research program on equipment design are discussed.

PHILOSOPHY

WILLIAM S. WEEDON, *Chairman*

Postulates, Hypotheses and Presuppositions. *Harold N. Lee, Tulane University*

The aim of this paper will be two-fold: it will be concerned in part with the logical analysis of the

concepts named in the title, and in part with the semantic usage of the terms. In connection with the latter aim I shall express my preference in semantic usage.

A postulate is a purely formal logical assumption. It has no necessary reference to the content of experience. An hypothesis is a general explanatory principle that *does* refer to the content of experience. Although based on the logical relation of implication it includes a necessary reference to content. A presupposition is not a logical concept. The term has only a semantic reference in pointing out principles unwittingly assumed in any argument; and to hold that a presupposition can be established by its consequences is spurious.

A Criticism of Logical Positivism. *A. Ripley, Los Angeles, California.*

This paper will summarize briefly the theory of meaning advanced by Rudolph Carnap, and then proceed to a criticism of this theory. A broadened verifiability theory of meaning will then be developed, and the paper will conclude by pointing out that Carnap's theory of meaning refers to a special class of propositions, which are covered by, but do not exhaust, the applications of the broadened theory.

In the development of the broadened theory of meaning distinction will be made between direct and indirect verification, between perspective constants and perspective variables, and between equivocal and unequivocal verification. The general thesis will be advanced that any proposition has meaning if it is capable of verification, whether direct or indirect, equivocal or unequivocal.

The Primary and Secondary Qualities of Time. *Lewis White Beck, University of Delaware.*

The common distinction between objective and subjective time is a special case of a more general distinction between the time order in which events occur (existential time) and the time order in which they are known (gnoseological time). There is, in addition, another distinction which should be drawn and which does not coincide with these. It is the distinction between primary and secondary time, i.e., time qualified by primary qualities only, and by both primary and secondary qualities, respectively. Many problems in epistemology have arisen through

a confusion of these distinctions. When these distinctions, especially the latter, are carefully drawn, some of these problems are considerably simplified. This will be shown in the case of transtemporal reference in perception and several other problems and paradoxes.

Inwardness as a Basis for Ethics. *A. L. Wheeler, University of North Carolina.*

The ethical and inwardness are the same in Soren Kierkegaard. Inwardness is achieved by an act of total resignation. The subject renounces all interest in the outer effect of his actions, on both himself and others, concentrating on the inward quality of his will. Neither rewards nor success are taken into consideration. Immorality begins with an orientation of our actions towards an outer goal.

The Unity of the Self. *James A. Pait, Emory University.*

This paper is based upon Kierkegaard's analysis of the aesthetic, moral, and religious stages of life. The question of the unity of the self arises when the nature of the three stages is examined. If these stages are discrete, as he appears to indicate, there can be no unity of the self and the possibility of an existential philosophy on grounds established by Kierkegaard is denied. However, if the stages emerge from one another, unity of the self is asserted, but Kierkegaard may be an Hegelian *malgre lui*. The implications of these viewpoints for existentialism are examined, and an evaluation of existentialist thought is attempted.

Philosophical Mysticism. *Anna Forbes Liddell, Florida State College.*

Many modern critics rule out mysticism as unscientific; the schoolmen rejected it as unorthodox. Both objections are essentially the same: immediate certainty transcends the limits of logical thinking, deductive as well as inductive.

The ghost will not be laid; it walks the length of our philosophical history from Pythagoras to Montague; modern naturalists have succeeded no more than Ionian physicists in exorcising this troublesome spirit.

In this paper the writer undertakes to explain why such efforts have to fail, and to show that what is properly called mystical experience is as normal and necessary as is sensation.

Mysticism is the act of realization; it is immediate, spontaneous acceptance of experience. Mysticism has no critical method; it swallows whole. Science has been described as critical common sense. Through science knowledge advances; the character of the content of experience is changed. At the level of mere *common sense*, mysticism is what Santayana happily calls "animal faith." Philosophical mysticism is far removed from "animal faith". In the realization of experience, "animal faith" is the actual, necessary beginning; philosophical mysticism is the fulfillment. "Animal faith" makes no demand upon conceptual knowledge; the mystical moment of insight does not come to the philosopher until after conceptual thinking has reached its utmost limit.

The enquiring or scientific mind is distrustful, even contemptuous of mysticism, not recognizing that only with reference to the realization of truth (the mystical moment in experience) do its own questions become pertinent. Only within the continuum of reality which mysticism apprehends can the process of science be carried on.

The writer will clearly differentiate philosophical mysticism from mystery cults, "second sight," and divination. The study will be based on the philosophy of Nicholas of Cusa as expressed in his chief work, *de Docta Ignorantia*.

Saturday, April 5, 1947

JOINT SESSION

PETER A. CARMICHAEL, *Chairman*

Some Conjectures Concerning the Relations of Philosophy and Psychology. *Albert G. A. Balz, University of Virginia.*

Interrelations between Science and Logic in Psycho-technology. *H. M. Johnson, Tulane University.*

Against certain durable superstitions I assert: (1) that every genuine technology, like every special science or set of sciences, originated in arts and practices; and that it is essentially a systematization thereof—and a fruitful systematization at that; (2) that the structure of every technology, and therefore its rules of description, depends on some system of postulates and a set of rules of reasoning which we call logic; (3) that this logic comprises the whole of

Aristotle's, when the latter has been cleared of certain well known defects; (4) that no genuine technology uses fact-finding procedures or rules of reasoning that would be invalid in any empirical science; (5) that not even the motives of the technologist and the scientist are separable, for understanding and control are not separable except by a fictitious boundary; (6) that in our finest samples of technology the workers have borrowed freely from many intersecting sciences, and both in method, theory and attainments they have returned the loan with interest. (7) Thus, the technologist is not an intruder if he tries to solve his own problems without waiting on the "pure" scientist in his ivory walled laboratory. He is not necessarily dependent on the pure scientist, but he is dependent on the logician and the mathematician.

Thus we need to distinguish between the technology and technique; between technologists and technicians. It has been suggested that such psycho-technicians as psychometrists (i.e., mental testers), educational and vocational guiders, psychoanalysts, are embryonic scientists or technicians whose procedures are still in a pre-scientific stage. But in so far as one employs anti-scientific presuppositions or a paralogic then one works not in a pre-scientific stage but rather in an anti-scientific stage.

Philosophies and Psychologies. *Herbert Sanborn.*

The interdependence of philosophies and psychologies is discussed with specifications. Realistic psychology founded on dogmatic realism operates with alleged independent psychic facts, which it purports to describe and explain by hypotheses and so called empirical norms derived from contexts. From a critical point of view psychology receives its problems from naive common sense philosophy of religion, ethics, aesthetics, education, epistemology, etc., and attempts some verification and validation of these data from practical life. Various forms of psychological methodology reveal a dialectic or progressive evolution in the solution of fundamental problems, which are seen, here as elsewhere, to be either pseudo-problems or at the best merely asymptotic approximations. Philosophy independent of psychology and psychology independent of philosophy are, taken *au pied de la lettre*, empty abstractions, resulting respectively in mere logicism or psychologism.

PROCEEDINGS OF THE TWENTY-SEVENTH ANNUAL MEETING OF THE WESTERN PSYCHOLOGICAL ASSOCIATION

LESTER F. BECK, *Secretary-Treasurer*

University of Oregon

THE Western Psychological Association held its twenty-seventh annual meeting on the campus of San Diego State College, June 19-20, 1947, with H. C. Steinmetz serving as local chairman. Other members of the local committee on arrangements were I. N. McCollom, M. W. Hays, O. J. Kaplan, W. H. Lucio, and H. C. Peiffer. Registered for the meeting were 166 members of the Association and more than 150 visitors, most of whom were fellow scientists attending the concurrent sessions of the American Association for the Advancement of Science (Pacific Division). The WPA sessions were integrated with the general program of the AAAS.

The WPA meeting was opened with an address of welcome by Dr. Walter R. Hepner, president of San Diego State College. This was followed by a joint session on statistical methods with the Institute of Mathematical Statistics, Helen Walker presiding. Other sessions during the two-day meeting were devoted to papers in the fields of learning, attitudes, test construction and analysis, child development, social and abnormal behavior, and clinical applications.

A round-table discussion of "The Psychologist's Role in Psychotherapy" was conducted Thursday afternoon by Theodore R. Sarbin, Boyd McCandless, S. M. Wesley, H. C. Steinmetz, Howard Hunt, and J. G. Miller. Thursday evening, the presidential address, "Some Lessons from Aviation Psychology", was delivered by J. P. Guilford. On Friday afternoon an open forum relating to problems of veterans' guidance attracted a large group of active participants.

Officers of the Association, elected for the year 1947-48, are: President, R. C. Tryon, University of California; Vice-President, R. W. Leeper, University of Oregon; Secretary-Treasurer, Lester F. Beck, University of Oregon. The Association

will hold its 1948 meeting June 17 and 18 at San Francisco State College.

PROGRAM OF PAPERS

Thursday Morning, June 19

Session I-A: STATISTICAL METHODS

Joint Session with the Institute of Mathematical Statistics

HELEN WALKER, *Chairman*

Statistical Criteria of the Effectiveness of Selective Procedures. *R. F. Jarrett, University of California.*

Many statistical devices are deficient in that they do not permit a satisfactorily precise estimate of the dollar value of the increased output expected from the selection program and thus leave unsettled the question as to whether or not the cost of such a program is justified. The relationship between the correlation coefficient on the one hand and the mean value of Y for an unselected population (Y being an objective output-type criterion), the standard deviation of Y for an unselected population, and the mean value of Y for the upper Np individuals selected on the basis of their high performances on the selective test X , on the other hand, provide the basis for estimating the increase in the mean output of a group of workers selected on the basis of a testing program yielding any specified validity coefficient with the criterion Y . Increase in productivity of selected workers is shown to be a function of the validity coefficient, the rigorosity of selection, and the coefficient of variability of the output criterion among "unselected" employees.

Unsolved Statistical Problems Arising in Psychological Measurements. *Helen Walker, Columbia University* (no abstract).

Cost Utility Curves as a Means of Assessing Batteries of Tests. *Joseph Berkson, Mayo Clinic* (no abstract).

Approaches to Univocal Factor Scores. *J. P. Guilford, University of Southern California.*

Despite a wide need for univocal factor scores, it appears to be impossible by present methods to construct pure tests for some common factors. Recourse must therefore be made to statistical control of component variances. The availability of a few univocal tests makes it fairly easy to derive each factor score from a minimum number of tests. Such tests serve well as suppression variables for their common-factor variances where not wanted in other tests.

Several principles may be invoked as objectives: (1) to maximize the desired variance in the impure test, (2) to reduce the undesired variance to zero, or (3) to minimize the undesired variance without intolerable loss of the desired variance. A secondary objective is to assure a combining weight of $+1.00$ for the test measuring the desired factor. Equations for achieving the objectives have been derived and the limitations and implications of each procedure have been noted. Thus, the situation seems hopeful for the achievement of univocal scores for a fairly large number of unique psychological variables. There are implications for experimental psychology as well as for vocational testing.

A Method of Binomial Analysis. *J. A. Gengerelli, University of California at Los Angeles.*

A method of analysis is presented which attempts to describe distributions of scores on psychological functions in terms of the parameters of the binomial $(p + q)^n$. The fundamental assumption is made that distributions of scores on psychological functions are generated by n independent, equally probable unit determiners, where n is finite.

From the expression for $Beta_1$ and $Beta_2$ for binomial distributions, a pair of simultaneous equations are formed which may be solved for n and p when $Beta_1$ and $Beta_2$ of the empirical distribution are inserted.

Results of the application of this method to data obtained in an experiment involving the effect of practice on variability are described.

Session I-B: ABNORMAL

ROY M. DORCUS, *Chairman*

A Study of the Personality of Alcoholics. *R. E. Harris, Langley Porter Clinic, and V. M. Ives, University of Southern California.*

An experimental group of 19 chronic alcoholics was matched for age, sex, and estimated IQ with a control group of mixed psychoneurotics. The subjects were given a battery of psychological tests including the Rorschach and the Minnesota Multiphasic. Comparisons were made with the control group and with available data on normal subjects. Each subject in the experimental group was rated by one psychiatrist familiar with all of the cases on a trait rating scale designed to summarize clinical features.

The results suggest a general neurotic structure for the alcoholics with some specific features which distinguish them from the control group. Outstanding among these is the evidence of considerable intra-individual conflict in the alcoholics with less disturbance in general social emotional relationships than the control group. The Minnesota Multiphasic shows elevations on the Pd scale greater for the alcoholics than for the control group, with significant emphases on the items relating to self-report.

Rorschach Studies on Alcoholism. *Charlotte Buhler, Los Angeles County Hospital.*

Rorschachs were given to 100 alcoholics, and the total mixed group of alcoholics' Rorschach sign distributions was compared with non-alcoholic groups of cases defined as normals, psychoneurotics, psychopathic personalities, organic defectives, and psychotics. The sign patterns of these groups had been obtained in the course of a standardization study on Rorschach sign distributions in various clinical groups. A list of 100 signs had been set up during this procedure, as it was with the alcoholics. The alcoholics' pattern compared closest to the psychopathic and organic patterns.

After subdivision of the alcoholic group into psychiatric clinical groups, the alcoholic psychoneurotics and the alcoholic psychopaths were compared with corresponding non-alcoholic groups. Two signs were found to be outstandingly significant in all alcoholic groups: low m and relatively high $(k + K)$. This sign pattern was analyzed theo-

retically and led to a specific dynamic interpretation of the alcoholic personality's emotional predicament.

An Attempt to Quantify Rorschach Responses.
D. Welty Lefever, University of Southern California.

A graphic technique is briefly introduced for interpreting Rorschach responses (in the relatively objective form of carefully defined "signs") by plotting the percentages of occurrence of each sign for a group of alcoholics and several contrasting clinical groups. These clinical groups include a normal group, a combined psychoneurotic group, a general psychopathic group, and an epileptic group.

The greatest difference is indicated between the alcoholic group and the normal group. A rather close resemblance is shown between the total alcoholic group and the general psychopathic group. Clinically defined subgroups of alcoholics also are compared with non-alcoholic clinical groups of similar type. The most definite similarity is demonstrated between the alcoholic and the non-alcoholic psychoneurotic groups.

Mean normality scores (a specially devised summarizing score) computed for the several alcoholic and non-alcoholic clinical groups are shown to be remarkably similar for comparable psychiatric diagnoses.

Rorschach Record from a Patient after Removal of a Tumor from the Frontal Lobe. *Jessie M. Ostrander, San Diego.*

This is a presentation of the Wechsler-Bellevue and Rorschach records of a man 38 years old, a former teacher, from whose frontal lobes a tumor "the size of a grapefruit" had been removed by surgery.

The W-B IQs were within normal limits. The lowest scores were on arithmetic problems and returning digits. The Rorschach responses showed some of the features previously noted in such cases, also six animal movement responses, pure form response average only 27%, form-level within average limits, and no uncontrolled color or shading texture responses.

The record is compared with those reported by Piotrowski, Tallman and Klopfer in the Rorschach Research Exchange, 1937, and by Harrower-Erickson in the Archives of Neurology and Psychiatry, May, 1940. This case adds to the data on

the subject but is insufficient for drawing conclusions about differential diagnosis.

Levels of Aspiration of Hysterics and Neurasthenics.
D. R. Miller, Stanford University (introduced by Maud Merrill James).

In this study, the Carl Hollow Square and Miles Finger Maze tests were used to obtain levels of aspiration. To insure comparable levels for different individuals, instructions were phrased to keep ego involvement at a maximum, and achievement scores were prearranged.

Criterion classification was based on agreement between clinical diagnosis and either the Rorschach Test or Minnesota Multiphasic Inventory. Patients were classified as conversion hysteria, vegetative neurosis, ward controls, normal controls or mixed cases. Selection was controlled for IQ, sex, age, and ward vs. out-patient categories.

All but one of the conversion hysterics had negative aspiration levels. In only one other group, ward controls, were any negative levels found. The average aspiration level of the vegetative neurosis group was higher than those of all other groups. There was a significant tendency for negative aspiration level to be associated with only children. A theoretical interpretation is offered concerning the relationship of level of aspiration to the type of symptoms developed.

The Use of Hypnosis in the Suppression of Intractable Pain. *Roy M. Dorcus, University of California at Los Angeles, and Frank Kirkner, Birmingham Hospital.*

It is well known that hypnosis can be employed for suppressing pain of various kinds. The authors have utilized this method for overcoming two pain-producing conditions which have not been given much attention in the experimental literature. The first of these conditions is pain associated with dysmenorrhea; the second is pain arising from the lower limbs in patients with spinal cord injuries. The immediate reaction of both kinds of patients to the therapy is very favorable. The dysmenorrheic and paraplegic patients react quite differently, however, insofar as the long-term effects are concerned.

A Social Psychological Theory of Hypnosis. *T. R. Sarbin, Los Angeles* (no abstract).

A Reappraisal of Insanity as a Scientific Concept.
D. B. Klein, University of Texas (no abstract).

Thursday Afternoon, June 19

Session II-A: DEVELOPMENTAL AND
SOCIAL

HAROLD F. JONES, *Chairman*

Reaction to "Hiroshima". *Joseph Luft and W. M. Wheeler, University of California at Los Angeles* (introduced by George F. J. Lehner).

The New Yorker issue for the week of August 31, 1946, was devoted to an account by John Hersey of the bombing of Hiroshima and how it affected the lives of six people. More than 300 "randomly selected" letters in spontaneous response to "Hiroshima" are studied. Whenever possible the correspondents are characterized in terms of sex, occupation, group identification and place of residence. An attempt is made to relate these factors to the comments abstracted from the letters.

Comments in the letters ranged from the expression of a desire that the story be made available to others and expressions of anxiety and guilt feelings, to a designation of the story as undesirable propaganda and a request that the subscription be cancelled.

The letters then are rated in terms of the approval or disapproval of the article and its publication. The general reaction of the sample population to this use of the atom bomb also is discussed.

Prospectus of the Make-A-Picture-Story (MAPS) Projective Personality Test. *Edwin S. Shneidman, University of Southern California*.

A new projective personality test, the Make-A-Picture-Story (MAPS), is described. In this test, the subject selects one or more figures (from among 60) and populates social or ambiguous background pictures, one at a time, telling a story of the situation he has created. Figures include men, women, children, animals, silhouettes, legendary figures, minority group figures, etc. Background pictures include a bedroom, a bathroom, a schoolroom, forest, stage, medical office, street scene, cave, bridge, attic, closet, etc.

On the basis of preliminary administrations, it is hypothesized that the MAPS test—by virtue of having another "degree of freedom", i.e., selecting the figures as well as enlivening and interpreting

them—is flexible and sensitive, possesses intrinsic subject appeal, obtains information on specific problem areas, and lends itself to quantitative treatment on the basis of objectively scorable "signs". Illustrative case data, using the Rorschach, the Thematic Apperception Test, the Minnesota Multiphasic, and the MAPS test are included.

Projections of Men and Women to Items Referring to the Same and the Opposite Sex on a Sentence Completion Test. *George F. J. Lehner, University of California at Los Angeles*.

A specially prepared sentence completion test was utilized, containing stimulus material which would "force" projections to items referring to either members of the same or of the opposite sex. This test consisted of 100 items—50 referring to the male viewpoint and 50 identical to the first but referring to the female viewpoint. These items were presented to 100 men and 100 women. Fifty of the men had no brothers or sisters, 50 had one or more sisters; 50 of the women had no siblings, 50 had one or more brothers.

The data obtained were analyzed to compare the responses of the males (with and without sisters) with those of the females (with and without brothers) to the "male" items and to the "female" items. The male responses to the "male" items then were compared with the male responses to the "female" items, and the different female responses similarly compared. The relationship of the responses of each group to the relevant variables, including the different diagnostic categories to which the items contribute information, is discussed.

Differences in Adolescent Sex Roles as Revealed by Colloquial Speech. *Mary Cover Jones, University of California*.

Comparisons were made of the verbalizations of boys and girls when conversing with the same and with the other sex in a clubhouse center. The language units were classified according to (a) content: appearance, school marks, etc.; (b) attitudes toward self: positive (self-protecting, etc.) and negative (self-abasing, etc.); (c) attitudes toward others: positive (friendly, etc.) and negative (criticizing, etc.); (d) function: to establish social ties, to express aggression, etc.; (e) parts of speech; (f) grammatical usage; (g) figures of speech and (h)

other colorful usages such as punning, rhyming, etc. Type-token ratios were computed to determine the range of vocabulary.

Unlike the sex differences in adult conversation (as reported in the literature) boys as often as girls discussed appearance and apparel, persons and personal attributes. In agreement with studies of young children, boys used "colorful" language (slang, epithets, etc.) more often than did girls. Boys used language for aggressive purposes more than girls, and more frequently the attack was aimed at their own sex.

Parental Attitudes Towards Sex Education. Berlan Lemon and L. F. Beck, University of Oregon.

Reactions of parents to an experimental sound slidefilm on the subject of human reproduction and growth were found to be generally favorable. More than 95% of parents attending P-TA meetings endorsed the film for showing to their pre-adolescent children.

In order to obtain a broader sample of attitudes towards sex education, a 20-item scale was prepared and administered to parents in groups and by mail in five Oregon communities. It was found that parents who participate in public school functions are significantly more liberal in their views on sex education than parents who stay at home. Spouses, irrespective of age, entertain a similar outlook on sex education. The results as a whole indicate that no less than five to twenty per cent of Oregon parents, depending upon the community, are opposed to sex education in public schools.

Suggestions are offered as to how sex education can be promoted in schools without arousing parental antagonisms towards the teacher or the school administrator.

Session II-B: EXPERIMENTAL AND LEARNING

MILTON METFESSEL, *Chairman*

The Relationship of Verbal Reaction Time to Hemisphere of Entry of a Visual Stimulus. Margaret Hubbard Jones and F. Nowell Jones, Washington State College.

If the theories of lateral cerebral dominance are correct, then a visual stimulus which first enters the right hemisphere should produce a longer verbal

reaction time in right-handed subjects than does a stimulus which first enters the left hemisphere. The reverse should be true in left-handed subjects. In this experiment single letters were presented in the periphery and the subject responded by naming the letter. Four left-handed and three right-handed subjects were used. In all but one subject stimuli in the right visual field produced slightly faster reaction times. There were no systematic differences between right- and left-handed subjects.

An Analysis of the Superiority of Binocular over Monocular Visual Acuity. Milton W. Horowitz, Stanford University.

Some of the factors that might conceivably affect visual acuity to render the binocular threshold lower than the monocular are considered both theoretically and experimentally. These include size of pupil, accommodation, convergence, anisocoria, fixation, chance factors, retinal rivalry, and a possible cortical interaction.

Both monocular and binocular data have been secured and have been analyzed by analysis of variance. The results suggest that retinal rivalry and pupil changes can account for much of the difference between monocular and binocular thresholds.

A Factor Analysis of Visibility Data. F. Nowell Jones, Washington State College.

A factor analysis using Thurstone's centroid method was performed on the visibility data published by Coblentz and Emerson. Measurements were available at 20 points on the spectrum for 80 S's. The measurements were made under conditions of photopic vision.

After rotation, three orthogonal factors were obtained. One of these accounted for all of the variance at the red end of the spectrum, with negative loadings in the green. A second factor had loadings primarily at the short wave-length end of the spectrum, and a third appeared in the yellow region.

Certain inadequacies in the data, such as lack of enough S's beyond 493 μ , restrict the interpretation of these results. The presence of negative loadings also requires explanation. Nevertheless, these results are not incompatible with a three-color theory of color vision.

A Technique for Reducing Muscle Action Potentials to Numerical Indices of Tension which Justify Comparisons between Individuals. *Roger B. Loucks, University of Washington.*

A technique is described which makes it possible to compare the amount of tension one individual exerts in carrying out a psychomotor task with the amount of tension another person utilizes in performing the same task. An electrical integrator summates the muscle action potentials representing tension used in performance of a task, and automatically reduces the activity to numerical scores. The numerical indices bear a straight-line relationship to muscular tension as measured on a dynamometer and are independent of the general strength of an individual or the size of his muscles. In measuring the tension exerted by subjects in performing a psychomotor test, the technique yields a reliability of .95. The method would appear to be of value in measuring the effect of drugs, anoxia, fatigue, and physical training on muscular tension.

This technique was developed by the writer in 1942 at the AAF School of Aviation Medicine, Randolph Field, Texas, in connection with research conducted for the AAF Psychological Classification Program. The work is being continued in the Department of Psychology at the University of Washington.

The Effect of Negative Incentives in Serial Learning. III. Fixation Due to an Isolated Verbal Punishment. *G. Raymond Stone, University of Oklahoma.*

Sixty human S's performed in a serial multiple-choice task in which a 39-item list of stimulus words was presented six times at a constant rate. The S's were instructed to respond to each word with some number between 1 and 10, and the E would indicate in many cases whether the response was "right" or "wrong", but for some items no information at all was given after the response. The experimental design incorporated a fixed order of the E's responses, unknown to the S, and thus allowed for the isolation of the effects of any one incentive response.

The questions to be answered by the data analysis are threefold: (1) Will an empirical baseline of repetition be greater than chance expectancy even when the E gives no informative response? (2)

Will the informative incentive word "wrong" reduce the number of repetitions to the item to which it is applied below an empirical base? (3) Will the reduction of repetition, if any, to the item called "wrong" be less than a chance value? The answers are relevant to the modern controversy over the negative statement of the law of effect.

The data support an answer of "yes" to question (1), and "no" to questions (2) and (3). The effect of the word "wrong" was to strengthen the S-R to which it was applied.

The Minimum Requirement for Learning a Maze Discrimination. *John P. Seward, University of California at Los Angeles.*

Tolman holds that a rat learns a maze by building up expectations at the choice points. The latent learning experiments indicate that this learning takes place independently of food reward. It follows that to learn a discrimination a rat must make differential anticipatory responses at the choice point, and this is all that is required.

To test this hypothesis a single-T alley maze was enclosed in a one-way screen to eliminate extra-maze visual cues. Two pairs of end boxes were used with different groups: in the first pair one box was black and the other white; in the second, both boxes were gray but the floors were of wire and sponge rubber, respectively. Hungry rats were allowed to explore the maze a half hour a day for three days. On the fourth day each rat was placed directly in one end box, fed for one minute, then placed in the start box and permitted to find his way to the food.

Preliminary results suggest that both pairs of end boxes yield successful performance. Control series are planned to discover the essential cues.

The Effect of Cognitive Structure on "Emotional Conditioning" and on Recall. *Ernest A. Haggard, University of California.*

Twelve subjects gave chain associations for 10 seconds to each of 42 stimulus words during three sessions. The list included 13 "rural" words, 13 "urban" words, and six repetitions of a *country-farm—(shock)—neutral word* sequence. Six subjects shocked themselves (S-shock), hence knew when the shock was coming, and six were shocked by the experimenter (E-shock), thus didn't antici-

pate the shock. The shock always occurred 10 seconds after *farm* and only during Session 2. After each session the subjects recalled the stimulus words. Between Sessions 2 and 3 all subjects learned the list to 85% recall.

During Sessions 2 and 3, (a) the E-shock subjects showed larger average GSRs to all words during both sessions, except to *farm* during Session 3, where the S-shock subjects showed significantly larger GSRs; (b) the subjects showing larger GSRs generally recalled more words; (c) both groups showed a marked drop in recall of neutral words following the shock; and (d) the S-shock subjects recalled relatively fewer "rural" words after Session 2 than did the E-shock subjects. Thus cognitive structure tended to focalize "emotional conditioning" and loss of recall to aspects of the situation closely related to the shock.

Friday Morning, June 20

Session III-A: APPLIED

ROGER B. LOUCKS, *Chairman*

National and Regional Programs of the Social Science Research Council, as Related to Psychology. *Harold E. Jones, University of California.*

Representing psychology and five other social science disciplines, the Council provides a means for interdisciplinary cooperation in the social sciences and also, through an inter-council organization, for associated activities with the natural sciences, education, and the humanities. The Council conducts specific research projects, awards fellowships and grants-in-aid, and supports committees for research planning and evaluation. Activities on the Pacific Coast are, in part, administered through a regional officer of the Council. Current activities of special interest to psychologists are reviewed and summarized.

Interaction between Physical and Human Variables in the Design of Equipment for Optimal Use. *Harry Helson, Bryn Mawr College.*

Evaluation of equipment in terms of optimal use received new impetus during the war. Formerly the man was especially selected for the machine or trained for specific tasks. Wartime research showed that accuracy and performance can be greatly improved, also learning time and individual differ-

ences greatly reduced, through improved design of equipment.

Three hypotheses are presented which served as heuristic principles in research: (1) there is an optimal range for physical variables yielding optimal performance; (2) performance depends upon operator tolerance determined by external as well as internal factors; (3) optimal values of a physical variable tend to be optimal when interacting with other variables—law of transfer of optimal range. Handwheel speed, diameter, inertia, friction, aiding time constant, and visual factors are discussed. Optimal performance depends upon interaction of human and physical variables, the latter needing much investigation. This study indicates the psychologist should be coordinate with the engineer in designing equipment for human use and sheds new light on sensori-motor performances.

Accident Proneness among Street Car Motormen and Motor Coach Operators. *Clarence W. Brown, University of California.*

The term "accident proneness" is used with several different meanings. When used to describe a general tendency of the individual to have accidents, the concept of accident proneness can be scientifically evaluated. A study of the inter-relationships among different types of accidents incurred by groups of street car motormen and motor coach operators verifies previous findings that any tendency of the individual to retain liability to have accidents under different circumstances is of very minor importance.

An Optometric Aptitude Test. *A. A. Canfield and Neil D. Warren, University of Southern California.*

On the basis of a job analysis and a careful evaluation of the course of study at an optometry school, a five-part aptitude test was constructed. Besides the factors of mathematical ability and general intellectual ability, an attempt was made to evaluate the person from the standpoint of clerical aptitude, persistence of attention, carefulness to work habits, and past history.

The test was administered to the junior and senior classes at the Los Angeles School of Optometry and inter-correlations between scores on the test and grades in school were computed. To see if this test was unique, the three sections chosen for final use in the selection battery (clerical aptitude,

mathematical ability, and general reasoning and verbal ability) were correlated with students' entrance examination scores in the University of Southern California.

Relatively high validities were found in the first administration. The correlation between the test as a whole and school grades was .68. Due to the relatively small size of the sample the standard error of the coefficient was about .10.

Personality and Character Requirements vs. Job Level as Shown by Civil Service Job Announcements. *Robert F. Utter, University of California at Los Angeles* (introduced by Roy M. Dorcus).

Four hundred twenty-five published job announcements of a large civil service agency for the year 1941-43 were analyzed to determine the relation of job level to personality and character requirements. The jobs were divided into four classes: unskilled, semi-skilled, skilled and professional. Percentage figures for the separate "traits" by job level showed no consistent relationship between skills and character requirements demanded.

A Summary of the Validity Coefficients of Certain Employment Tests. *Edwin E. Ghiselli, University of California.*

Approximately 700 validity coefficients for some 20 different tests are summarized. In all instances the criterion used in validation was some index reflecting productivity, or supervisors' ratings. The coefficients employed were collected both from published and unpublished sources. The median validity coefficients of the various tests are presented for different occupational groups.

A Study of the Intra-individual Relationships between Interest and Ability. *S. M. Wesley, Barbara Stewart and Douglas Corey, University of Southern California.*

An important question from the vocational guidance standpoint is: Does the individual tend to show relatively stronger interest in those areas where his ability is relatively greater than in areas where his ability is less (using his own general level of both interest and ability as the base from which these measurements are taken)?

This study is based upon more than 125 cases, all of whom were given the Kuder Preference Record and one or more ability test in each interest area

covered by the Kuder, except for the Persuasive and Social Service areas. The Army Alpha Examination, First Nebraska Revision and the Minnesota Multiphasic Personality Inventory also were administered. Results are presented in terms of rank order correlation coefficients and over-all correlations between interest and ability within each of the seven interest-ability areas studied. These correlations are based upon measures of interest and ability expressed in terms of deviations for each individual subject from his own general level in each area. The results of a comparison of the personality characteristics of subjects with a high congruence of interest and ability with those of subjects who have a low congruence are given.

Clinical Use of the Altus Adjustment Test in Screening Army AWOL's. *Jerry H. Clark, Veterans Administration Guidance Center, Santa Barbara.*

The Altus 36-point Adjustment Test was given to a random sample of 100 Army AWOL's who also were given the Wechsler Mental Ability Scale, Form B, and the Minnesota Multiphasic Personality Inventory. The correlations of the adjustment questions with the Wechsler subtests were generally insignificant. The correlations with the MMPI were, however, quite high: with the Hs Scale, .82; Hy, .83. Twelve of the 36 items in the adjustment test were almost as good as the total test; these 12 items had been validated as measures of hypochondria and hysteria. The *r*'s of these 12 items (which took only about one minute to administer orally) with the "neurotic triad" of the MMPI were .80 with Hs, .78 with D, and .86 with Hy.

The tentative conclusions are (1) that orally administered adjustment tests have validity, (2) that civilian agencies could profitably use the 12 adjustment points for selecting those with putative neurotic tendencies for further screening and study by longer and more refined measures like the Rorschach, MMPI, TAT and personal interview.

Age and Hand Strength. *M. Bruce Fisher, Fresno State College, and James E. Birren, Northwestern University.*

Measurements of hand strength were made on 988 naval and industrial personnel by a test procedure requiring increasing levels of work output. In a group of 552 male manual workers in one industry, who ranged in age from 18 to 68, the maximum

strength was in the middle twenties, with a drop to 84% of the maximum at age 60. Standard deviations were 10 to 15% of the mean at each age level.

These findings are compared with other data on strength measures and are discussed in the light of a statistical evaluation of sampling bias in a similar "cross-sectional" study of ability change with age.

Session III-B: ATTITUDES

D. B. KLEIN, *Chairman*

An Approach to the Theory and Measurement of Ethnocentrism. *Daniel J. Levinson, University of California.*¹

An Ethnocentrism (E) scale was constructed containing three subscales dealing with Negroes, other minorities and patriotism. A previously developed Antisemitism scale also was given. The reliability of the E scale was .91; other statistical properties were equally satisfactory. The correlation of .8 between ethnocentrism and antisemitism suggests that antisemitism is one facet of general ethnocentrism. Scales of political-economic conservatism and of moralism-conventionalism each correlate .5 with the E scale. These relationships are interpreted in the light of a distinction between the pseudo and the genuine in respect to conservatism, moralism, and patriotism.

The following concept emerges: Ethnocentrism is based on a pervasive and rigid ingroup-outgroup distinction; it involves stereotyped negative imagery and hostile attitudes regarding outgroups; positive imagery and submissive attitudes regarding ingroups, and a hierarchical, authoritarian view of group interaction in which ingroups are rightly dominant, outgroups subordinate.

The Measurement of Implicit Antidemocratic Trends. *R. Nevitt Sanford, University of California.*²

The aim was to construct an instrument which, without appearing to deal with race prejudice or fascism, would measure receptivity to antidemo-

cratic propaganda and predict scores on an ethnocentrism scale. The following central dispositions within the prejudiced person were conceived of: conventionalism, authoritarian submission, authoritarian aggression, anti-intraception, superstition and stereotypy, power and "toughness", destructiveness and cynicism, projectivity, disapproval of sex. Items pertaining to these variables were included in the 30-item "scale". Each item was a statement of attitude or opinion in such non-ideological areas as the self, the family, people in general, sex, etc. After two revisions, the scale was administered to 1,518 men and women in 14 groups representing various walks of life.

The average reliability coefficient was .90, the average correlation with the California Ethnocentrism Scale, .75. These results give evidence of the functional role of personality trends in organizing surface attitudes, opinions and values.

A Method of Scoring Interviews of Prejudiced vs. Unprejudiced Subjects. *Else Frenkel-Brunswick, University of California.*³

An attempt was made to score clinical interviews from subjects extremely high and extremely low on ethnic prejudice. The scoring categories represented specific hypotheses rather than a more generalized approach to personality. "Blind" scoring by raters unfamiliar with the ideologies of the subjects revealed most of the approximately hundred categories as discriminatory.

Whereas the unprejudiced seem capable of overtly verbalizing mild aggression toward parents and family, combined with genuine affection, the prejudiced hide strong resentments and feelings of victimization behind overt glorification and submission, and cover underlying disrespect and hostility toward the opposite sex by pseudo-admiration. Social relations of the prejudiced tend toward an exploitive, power-oriented (as contrasted with a more love-seeking) attitude. Non-acceptance of negative traits in themselves and the ingroup tend to accompany signs of rigidity and narrowness of the ego, intolerance of ambiguity, pseudo-scientific thinking, and an anti-intraceptive attitude. An attempt was made to counterbalance, by considerations of reliability and validity, the deliberate complexity and inferential character of the scoring categories.

^{1, 2, 3} The papers by Levinson, Sanford and Frenkel-Brunswick deal with several aspects of a research project on social discrimination, sponsored by the American Jewish Committee and carried out by the University of California Public Opinion Study and the Institute of Social Research. The entire project will be reported in full elsewhere by T. W. Adorno, Else Frenkel-Brunswick, D. J. Levinson and R. N. Sanford.

The Differential Ordering of Minority Groups on Five Aspects of Prejudice. *Donald T. Campbell, University of California.*

Scales were prepared to measure five specific aspects of prejudice: "Social Distance", "Blaming" "Affection", and ideas regarding the "Capability" and "Morality" of the outgroup. Attitudes in these modalities were measured toward five minority groups: Negro, Japanese, Jewish, Mexican and English. While the study focused chiefly on the pattern of highest intercorrelation among the 25 specific scales thus created, this paper deals only with the different rankings given the outgroups on the five attitudes.

In a preliminary sample of 150 subjects, each of the five attitude modalities gave preference orders unique to a greater or less extent. To take an extreme example, the minority group most blamed also is seen as the most capable. Tentative conclusions are: (1) Insofar as tested by the ordering of outgroups on these modalities, "prejudice" is not a completely homogeneous entity. There is, however, a strong common component. (2) No single modality is adequate to determine which group is the object of the most "prejudice". (3) The construction of meaningfully comparable tests of "prejudice" will be difficult.

An Exploratory Study of the Psychodynamics Underlying Racial Attitudes. *Arthur Globe, University of Southern California* (introduced by G. H. Seward).

The problem was to determine the psychodynamic factors underlying racial attitudes. For preliminary sorting, a modification of Bogardus' Social Distance Scale was administered to a group of 200 male veterans attending classes at the University of Southern California. From the distribution thus obtained, the upper and lower 10%, representing the liberal and reactionary extremes in attitude, were selected for intensive study. The Adorno-Brown modification of the Rosenzweig Picture Frustration Test was used in conjunction with an interview as a means of exploring the psychodynamic factors differentiating the extreme attitudes. Preliminary examination of the data suggests that the chief factors responsible for the differences in racial attitudes between the extreme groups are to be found in early familial influences.

Psychodynamics of the Attitudes of Ex-service Men Toward Feminism. *Robert Lilly, University of Southern California* (introduced by G. H. Seward).

To obtain extreme belief patterns from a group of 200 men in beginning psychology classes, Kirkpatrick's Belief Pattern Scale for Measuring Attitudes Toward Feminism was used. This scale contains 40 patriarchal items, 40 liberal or feminist items meaning male-female equality, and a bio-data sheet. To get at the deeper feelings, a series of eight male-female situations were set up whereby the subject projected an answer to a statement by the female. A "performance" was obtained, and then an "inquiry" followed to determine reasons for the subject's projection.

The distribution on the Kirkpatrick Scale was bell-shaped with a range from quite patriarchal beliefs to very liberal, but with most of the men showing dichotomous attitudes. However, the sample did lean to the liberal side. Whether or not these subjects were just giving lip service but felt otherwise should be revealed by the projections. So far a pilot study with the projection technique brought out dominance-submission factors.

Ethnocentrism and Humor Appreciation. *Joseph Adelson, University of California.*

One hundred and ten college students were rated on the California Ethnocentrism Scale. They then were asked to rate 25 jokes, dealing with five humor themes, on a nine-point scale. Ethnocentric men rated sex jokes and jokes ridiculing physical defects higher than did non-ethnocentric men. Prejudiced women rated jokes about stinginess higher than did non-prejudiced women. These differences were reliable at the 2% level or above. No differences were found for "shaggy-dog" jokes or for jokes ridiculing authority figures. Bob Hope was the favorite radio comedian of the ethnocentric men and women.

The results of the study tend to support a theory of specific personality differences between prejudiced and non-prejudiced individuals.

Ethnocentrism and a General Mental Rigidity Factor—A Further Experiment. *Millon Rokeach, University of California.*

Previous experiments with an arithmetical tech-

nique provided strong evidence that the mental rigidity characteristic of ethnocentric individuals manifests itself also in solving non-social problems. Measures of concrete thinking also were significantly associated with ethnocentrism. In a parallel experiment, the hypothesis was tested by another non-social, non-arithmetical technique. To establish a set, five simple maps, identical except for street names, were presented for 15 seconds each. After each map was presented the subject described how to go from the southwest corner to the northeast corner. Then followed five critical problems, identical with the previous problems except that diagonal short-cuts were possible. Concrete thinking was measured by verbalization and the use of scratch paper. Twenty-three high- and 23 low-prejudiced subjects (upper and lower half) were selected by the California Ethnocentrism Scale. The per cent rigid solutions to the five critical problems were 43, 39, 22, 22, 22 for the highs; 17, 17, 17, 13, 4 for the lows. On all problems those scoring high on ethnocentrism verbalized more than those scoring low. Scratch paper showed no consistent differences. A theory of the causes of general rigidity is presented.

Friday Afternoon, June 20

Session IV-A: EDUCATIONAL AND CLINICAL

H. C. STEINMETZ, *Chairman*

The Clinical Program of the California Youth Authority. *Burton M. Castner, State of California.*

The Youth Authority, a state agency with jurisdiction over offenders under 21 committed to it by the courts, bases its programs of training, treatment, and parole as far as possible upon clinical findings and recommendations. The Division of Diagnosis and Classification comprises, besides the Chief of the Division, a staff of five Senior Clinical Psychologists, with consulting psychiatric service available. Two training schools also have full-time staff Psychologists. Most youths committed now receive psychological study and observation for several weeks before later disposition is determined. Therapy is provided for a limited number of cases which will be increased as the program expands. Plans call for the earliest possible establishment of two Reception Centers, with

enlarged clerical staffs, to provide every youth with psychological, psychiatric, medical, and other studies prior to assignment to any training or custodial institution. The Research and Statistics Section of the Authority, through its card-punching system, cooperates in making social and psychological data available.

The Autobiographical Questionnaire as an Instrument in Clinical Interviewing. *J. Gustav White and R. W. Dutcher, Los Angeles.*

The autobiographical questionnaire described was found to have the following characteristics:

Objections: (a) It is not a self-inventory, but covers information areas only. (b) It is time-consuming to fill out and requires too much writing. (c) Rapport must be established *prior* to filling out the blank. (d) One form does not meet the individual differences of various clients and agencies.

Advantages: (a) The counselor obtains a great deal of pertinent information with a minimum of personal effort and time. (b) Clients normally give more information than would be elicited otherwise, realizing that counseling aid is proportionate to information given. (c) Clients gain insight in the process. (d) The device gives the client opportunity to express himself subjectively while tests give more objective data. (e) Special adaptation of pertinent data for each counseling interview is possible.

This instrument has been used widely for nine years in its present form, but now is undergoing revision to make it more adaptable to a wider variety of situations such as paid clientele, collegiate or secondary grade levels, social agency clients, veterans, church groups, vocational rehabilitation trainees, etc.

The Rorschach as a Differential Predictor of Academic Success for Matched Groups of Highly Superior Men. *Boyd R. McCandless, San Francisco State College.*

Two groups of highly superior men enrolled in a Maritime Service Officers School were matched on the basis of General Classification Test score, age, education, mechanical comprehension, reading comprehension and math. The first group had an academic average for the intensive four-month training program of straight A's; the second group averaged low C's and D's and were nearly disqual-

ified for academic failure. Individually administered Rorschach tests were investigated for differences which might explain this great performance discrepancy.

There were no significant differences, although the high grade-point men tended to show less fluidity and strength of emotion, and indicated more anxiety in some areas than did the low grade-point men. They also paid slightly less attention to the blots as a whole and more to the large, common and the small, uncommon details, and had more popular responses. Beck's "organization score" made a negative discrimination (the low grade-point men were higher, although not significantly).

Non-Intellective Factors and Grades: The Group Rorschach. *Grace M. Thompson, University of California* (introduced by W. D. Altus).

The group Rorschach was administered to 128 students of general psychology. The records were scored mainly by Beck's system, though Klopfer's *FM* and *m* (animal movement, inanimate movement) also were used. Fifty-two types of data from each record were item analyzed in terms of semester grades and verbal aptitude test scores. Thirty-four of the 52 items eventually were combined into a quantitative score which yielded a Pearson product-moment coefficient of correlation of .52 with psychology grades. The 36 best items, in terms of aptitude score item analysis, gave an r of .51 with verbal aptitude test scores. Twenty of the 52 items correlated .38 with grades, .04 with aptitude. The aptitude test correlated .66 with semester grades; when the 20 "non-intellective" items were combined with aptitude for grade prediction, the resultant coefficient of multiple correlation was .74. These non-intellective Rorschach factors may be considered a partial index to motivation, if motivation is defined as the tendency to excel in grades when aptitude is held constant.

Non-Intellective Factors and Grades: Study Habit and Adjustment Tests. *William D. Altus, Santa Barbara College.*

An adjustment test, constructed by the writer, and a study habit inventory were administered to 138 students of elementary psychology. Both tests were item analyzed in terms of a verbal aptitude test and semester grades in psychology. Thirty-seven items were selected which had either zero or

negative correlation with aptitude but positive correlation with grades. The resulting Pearson product-moment coefficient of correlation with grades was .34; with verbal aptitude the r was negative, $-.05$. The adjustment test, with items relating to food aversions, disgusts, activity preferences, controlled associations, etc., correlated .21 with grades and $-.30$ with aptitude. The aptitude test yielded a coefficient of .60 with semester grades. When all three tests were combined into a multiple coefficient of correlation, the r was .76.

Eventually it may be possible to isolate a combination of adjustment items, study habit items, and data from the group Rorschach which will yield grade-correlational data as high as that now found through aptitude tests. If such tests, when isolated, can be kept truly non-intellective, a large step will have been taken in grade prediction and in the measurement of a specific type of motivation.

Private Clinicians in Los Angeles: A Study in Quackery. *Edward J. Shoben, Jr., University of Southern California.*

A questionnaire relating to background and services was distributed under a disguising cover letter to 88 self-styled clinical psychologists in Los Angeles. Forty replies were received, with additional data obtained through telephone contact on 13.

The material on training was evaluated against the suggestions of the Shakow report (David Shakow *et al.*, "Graduate Internship Training in Psychology," *J. Consult. Psychol.*, 1945, 9: 243-266), and only three respondents measured up to recommended standards. Twenty per cent of those replying had no college degree; two others had high school plus chiropractic college, and one, high school plus osteopathic training.

In terms of services offered, there was no relationship between the scope of clinical abilities claimed and background factors. Thirty-eight claimed to do counseling and psychotherapy, using techniques that ran from "common horse sense" through "spiritual philosophy" to "hypnosis" and "psychoanalysis". Seven listed themselves as speech correctionists, whereas only one reported specialized training in this area. The mean fee was \$9.00 per hour.

Dimensions of the Counseling Process. *Edward S. Bordin, Washington State College.*

Terms used in discussing counseling methodology are largely hortatory in implication. The juxtapositions of "directive"—"non-directive", "counselor-centered"—"client-centered", and "undemocratic"—"democratic", in discussions of issues in counseling only confuse the analysis and imply a pre-judgment of the questions. No counselor wants to admit that he is "directive", implying that he does not respect the integrity of the individual or "counselor-centered", implying that he is more concerned with his own need than the client's, and certainly he does not want to be called "undemocratic" or authoritarian.

The issues need to be re-phrased in non-ethical terms—operational terms which may lead to definitive studies and place them before counselors on a non-threatening basis. Three types of variation in counseling methods are analyzed: (1) In degree of responsibility ceded to the client; (2) In degree of responsiveness to the attitudes as compared to intellectual content in client expression; (3) In methods of handling client attitudes ranging from reasoning to facilitating client expression and manipulation of his own attitudes.

A Preliminary Report of an Evaluation of the Veterans Administration Counseling Service in the University of Oregon. *John R. Ward and Leona E. Tyler, University of Oregon.*

Sixty non-selected veterans who had received Veterans Administration counseling prior to January, 1947, were matched with an equal number of non-counseled veterans. None of the included veterans had service-connected disabilities, and all were entering freshmen. The matching was done on the basis of age, Ohio Psychological Test scores, and school (Liberal Arts, Education, etc.).

Winter term grade point averages for both groups were computed. While the counseled veterans had a slightly higher mean grade point average, the critical ratio was found to be only 1.19 (probability = .24) which is not statistically significant. A special scale was constructed in an attempt to measure the adjustment of the two groups to the college situation. The counseled veteran's mean score was slightly higher (higher scores indicating poorer adjustment as measured by the scale). However, the difference was not statistically significant (critical ratio = .30).

The large majority of counseled veterans believed that other entering freshmen would profit from the counseling.

Session IV-B: TEST ANALYSIS

H. R. TAYLOR, *Chairman*

An Investigation of the Influence of Preceding Items on Subsequent Items in a Questionnaire. *George E. Mount, University of California at Los Angeles.*

A question concerning the dependence of the predictive value of test items on position in the test arose in connection with the standardization of an interest questionnaire for industrial selection. A further question arose concerning the possibility of deriving new forms of the test from items constructed as logically similar to significant items on the original form.

An interest questionnaire was administered to a preliminary sample group to locate items showing a significant relation to the criterion. Half of these items were left in the original position along with the non-significant items. Non-significant items were deleted from the remainder of the questionnaire. This shortened the test by about one-third, and the revised form was expanded by including new items logically related to those previously found significant. The revised questionnaire was administered to a new sample group to determine the predictive value of the three new sets of items. Results are discussed.

Manipulations of the Units of a Ratio Scale as Comparative Judgments. *Milton Melfessel, University of Southern California.*

A method combining ranking and rating is proposed for practical and theoretical problems of psychology. The operations of the method are as follows: (1) The subject is requested to rank in order on any prescribed dimension a given number of items, and (2) he is given 100 units (pennies, chips, or marks on paper) with the instruction to assign all the units to the items so as to express his judgment of how much more or less one item is than another or all others on the stated dimension. Or, he may be asked to report his judgments of ratios between the items. The advantages and limitations of the proposed method and the relationships

to psychophysical, ranking, rating and paired comparisons methods are discussed. It is recalled that the scale of cardinal number is a ratio scale, and the principle of the method involves a direct or symbolic manipulation of the units of the scale of cardinal number in reporting comparative judgments.

Relationships of the Hildreth Feeling and Attitude Scales to the Minnesota Multiphasic Personality Inventory. *Edward L. Hunt and George F. J. Lehner, University of California at Los Angeles.*
The Hildreth Feeling and Attitude Scales, based on an adaptation of the Thurstone attitude-measuring technique were designed for clinical and research use to quickly measure current "feeling states". The scales are composed of eight subscales, four comprising the Feeling and four the Attitude Scales. Hildreth reports data on the use of the scale with a group of male patients, normal and neurotics, in a military hospital.

The purpose of the present research is to study the relationship of the F-A Scales to the MMPI in a group of normal male and female subjects. The data obtained on the F-A Scales and its interrelationships with ratings on various MMPI Scales are presented.

A Study of the Diagnostic Utility of the Minnesota Multiphasic Personality Inventory. *Howard F. Hunt, William A. Cass, Jr., Abraham Carp, and Clarence L. Winder, Stanford University.*

This study was designed to determine the utility of the Minnesota Multiphasic Personality Inventory in differentiating between psychosis and psychoneurosis among male neuropsychiatric patients. This diagnostic differential is frequently requested and, because of its implications for ego strength and regression, is often an important consideration in management and therapy.

All sufficiently cooperative patients entering the hospital between November 1, 1946, and April 5, 1947, were routinely tested with the MMPI. Of these, 141 patients produced profiles which were valid according to the usual criteria. These records were filed and did not contribute to the hospital diagnoses.

The valid profiles were sorted by the authors into diagnostic classes as defined objectively in published

literature on the MMPI. The results of this sorting were compared with the independent criterion of official hospital diagnosis. The statistical significance of these comparisons also is presented.

A Factorial Study of Achievement in West Point Courses. *Andrew L. Comrey, University of Southern California* (introduced by J. P. Guilford).

A centroid factor analysis was performed upon a matrix of intercorrelations including 12 paper-and-pencil tests, one psychomotor test, grades in seven West Point courses of study, and a variable made up of ratings of West Point cadets by their buddies and officers.

Eight factors were extracted and their axes rotated to psychological meaningful positions. The factors were named as follows: (1) a Halo factor, common to all measures of school achievement; (2) a mechanical experience factor involving prior experience with machinery; (3) a perceptual speed factor; (4) a reasoning factor; (5) a verbal factor; (6) a number factor; (7) a spatial factor, and (8) a pilot interest factor, defined by a biographical data test scored for pilot selection.

Analysis of the factor pattern and the correlations between factors revealed that school achievement in West Point was dependent to a large extent upon a subjective element common to all the grades and ratings, which was designated as the Halo factor. Verbal, numerical, and reasoning abilities also appeared to be of importance. Two courses of a military nature involved mechanical experience in addition to those abilities which appeared in the academic courses and the Halo factor.

An Investigation of the Contributions of Factors to Tests and to their Predictive Value in Two Army Air Forces Pilot Populations. *William B. Michael, University of Southern California.*

The purpose of the investigation was to determine the influence of two pilot populations (815 West Point cadets and 356 Negro cadets) upon the factor composition of two comparable test-batteries, of a pass-fail criterion in pilot training, and upon the prediction of criterion scores and factor scores from optimally weighted tests. A major objective was to relate the traditional multiple-regression techniques in the investigation of test validity to the

newer approaches made possible by the Thurstone system of factor analysis. Following rotation, eight factors for the West Point group were identified as mechanical experience, number, pilot interest, psychomotor coordination, perceptual speed, reasoning, spatial relations, and verbality. For the Negro group, variance in seven of these eight factors appeared, and an eighth factor identified as *kines-thesis* emerged.

For West Point Cadets the three most valid factors in the prediction of pilot success were pilot interest, psychomotor coordination, and spatial relations; for Negroes, kinesthesia, perceptual speed, and spatial relations. Intellectual factors of number, reasoning, and verbality were not valid for either group.

A Factorial Study of Fluency. *Benjamin Fruchter, University of Southern California.*

During the war interest was aroused in the effect of fluency on reaching correct solutions to judgment problems connected with military flying. Thurstone previously had identified a Word-fluency factor. It seemed possible that other fluency factors might be identified from Thurstone's data, since not all of his axes had been rotated to positions of simple structure and positive manifold, and some of his factors were not identified.

A sub-battery of 20 tests was selected from Thurstone's Primary Mental Abilities Battery, and eight new centroid factors were extracted. After rotation, six factors were identified with reasonable confidence. They are Verbal, Spatial-relations, Visualization, Reasoning, Perceptual, and Word fluency. Two factors were less well identified—one interpreted as a "Speed-of-association" factor.

The major conclusions are: (1) Two, possibly three, types of verbal fluency can be identified.

(2) A universal fluency factor, common to both verbal and non-verbal tests, did not appear. (3) Separate spatial and visualization factors can be brought out from Thurstone's data.

A Factor Analysis of the Bernreuter Personality Inventory. *Glenn C. Martin, Los Angeles City College.*

This analysis was undertaken in an effort to reduce scoring on the Bernreuter Inventory to a practicable compass, and incidentally to verify Flanagan's analysis of the intercorrelation data. The material is the matrix, including the two Flanagan scales, published in the 1935 manual; the method is Thurstone's centroid solution.

Three extractions were made, yielding high factor loadings: on scales B 1-N, B 3-I and F 1-C for Factor I, B 2-S and F 2-S for Factor II, and rather low loadings for B 3-I, B 4-D and F 2-S for a possible Factor III. Considering reliability, purity and independence of each scale it is deemed feasible to use F 1-C as representative of Factor I and F 2-S for Factor II. Identification of these factors depends on the manual descriptions of the scales carrying the heavy loadings, which suggest "neurotic introversion" for Factor I and "sociability" for Factor II. The analysis of variance shows that 84% of the effective measurement of the Inventory can be described in these terms. However, the validity of these titles in turn depends upon correlation with previously validated tests—not too convincing evidence. Comparison with the Flanagan results using the Hotelling method shows rather striking agreement, lessening the probability that statistical artifacts are being created. The Bernreuter weights are used, rather than the simplified Bennett values, to preserve discrimination gained thereby.

PROCEEDINGS OF THE NINETEENTH ANNUAL MEETING OF THE MIDWESTERN PSYCHOLOGICAL ASSOCIATION

CLAUDE E. BUXTON, *Secretary-Treasurer*

Northwestern University

THE Midwestern Psychological Association held its nineteenth annual meeting at the Edgewater Beach Hotel in Chicago on May 2 and 3, 1947. The program was arranged by a committee consisting of Harry F. Harlow and Agnes A. Sharp. Local arrangements were made by the Chicago Psychological Club, with Edwin Brye, Ruth Wyatt, Grace B. Thiesen and George Speer serving as committee chairmen. Members, guests and applicants for membership in attendance totalled 735.

The program included 75 papers, arranged in 10 sections, and four symposia. The symposium topics and participants were: "Problems and Trends in Veteran and Non-veteran Counseling at the College Level," Fred McKinney (chairman), John Darley, Wilma Donahue, William Gilbert, Hyman Meltzer, E. H. Porter, Jr.; "Problems and Trends in Industrial Psychology as a Profession," Harold C. Taylor (chairman), Orlo L. Crissey, Perry L. Rohrer, Joseph Tiffin, Richard S. Uhrbrock; "Experimental Approaches to Personality," Ann Magaret (chairman), Chester W. Darrow, Sol Garfield, Calvin S. Hall, Julian B. Rotter, Helen Sargent; "Experimental Social Psychology," Rensis Likert (chairman), Angus Campbell, Sebastian De Grazia, Maurice Janowitz.

On Friday afternoon Dael Wolfe delivered the presidential address under the title, "Sensible Organization of Courses in Psychology." The address was preceded by a social hour. On Friday evening the annual business meeting was held. Among the items of business transacted were the following: the program committee for the 1948 meeting was instructed to prepare and distribute with the call for papers a set of criteria according to which the program committee will judge papers submitted to them; the date of assumption of office by the incoming president and council member was moved forward from October 1 to the close of the annual meeting; the Association agreed to give \$25 toward the support of the Inter-Society Committee for a National Science Foundation; Dael Wolfe was elected the Association's representative to the Council of the A.A.A.S. for a five-year term; dues were raised to \$1.50 per year.

Officers elected were: President, Harry F. Harlow (1947-48), member of Executive Council, Robert R. Sears (1947-50). The association accepted the invitation of the University of Minnesota to hold its 1948 meeting in St. Paul on May 7-8, 1948.

The following 126 persons were elected to membership:

Anderson, Gladys Lowe
Asher, E. J.
Astrachan, Myrtle
Baden, Sam
Baldwin, Alfred L.
Barnard, Maryline
Barry, John R.
Beier, Delton
Benton, Arthur L.
Bischof, Ledford
Bouman, Harry D.
Brookhart, Maurice E.
Browne, C. G.
Brown, Judson S.

Brye, Edwin
Bugental, James F.
Buller, Francis P.
Cable, Julia L.
Cattell, Raymond B.
Challman, Robert
Davidoff, Melvin D.
Davis, Dwight D.W.
Delp, Harold A.
DeMand, John W.
Dennis, Wayne
Denny, M. Ray
Diserens, Charles M.
DuBois, Philip H.

Dunn, Michael B.
Ehrenfreund, David
Elste, Ellen
Ellson, Douglas G.
Evans, Chester
Fairbairn, Margaret E.
Fiske, Donald W.
Fitts, Paul M.
Fletcher, Frank M., Jr.
Forster, Max H.
Fassett, Katherine K.
Franklin, Joseph C.
French, Elizabeth G.
Freyman, Grace Marie

Gellman, William
Gerken, Clayton d'A.
Gibb, Jack R.
Goertzel, Victor
Goodbar, Suzanne B.
Gordon, Donald
Gough, Harrison G.
Gourevitch, Victor
Graebner, Oliver E.
Grether, Walter F.
Grice, G. Robert
Hake, Harold
Hamlette, Iona C.
Harsh, Charles M.
Harvey, Jean
Hilkevitch, Rhea R.
Hill, Harris
Hobbs, Walter R., Jr.
Hobson, Robert
Holt, Robert R.
Hornseth, John
Horrocks, John E.
Humes, John F.
Jackson, Boyd
Jenkins, Mildred E.
John, Elmer
Jones, Marshall R.
Kalhorn, Joan

Kelly, George A.
Knauft, Edwin B.
Kryter, Karl
Kuenne, Margaret
Langford, Roy C.
Lauer, A. R.
Lichte, William H.
Littman, Richard A.
Long, William F.
MacCorquodale, Kenneth
Macduff, Mary M.
Maves, V. W.
McClelland, Wm. A.
McGinnis, John
McIntyre, Sherwood C.
Mellenbruch, Parl L.
Mensch, Ivan
Mitchell, Mildred B.
Morrow, Mary Adele
Mote, Frederick
Osterberg, Wesley
Pattie, Frank A.
PHELPS, Harold R.
Price, Mary Alice
Rector, Alice P.
Ringgold, Arlene
Riopelle, Arthur J.
Ripper, C. Harold

Robinson, Mary F.
Rosen, Hjalmar
Rotter, Julian B.
Schrickel, Harry G.
Schumacher, Audrey
Sears, Richard
Seck, George
Shakow, David
Shuman, Helen
Simos, Irving
Siple, Howard L.
Smith, Anthony
Stavrianos, Bertha
Strother, George B.
Swan, Robert D.
Thalman, Wellington A.
Thomas, Wm. F.
Thune, Leland E.
Todd, J. Edward
Van Dusen, A. C.
Weaver, Benjamin H.
Weider, Mrs. Arthur
Wexler, Milton
Wiener, Daniel N.
Wilkins, Walter L.
Williams, Meyer
Wittig, Ruth B.
Young, Marguerite

PROGRAM

Friday, May 2, 9:00 A.M.

SECTION A. NORMAN CAMERON, *Chairman*

A Trial Coordination of Formal Testing and Therapy in a Child Guidance Clinic. *Newell T. Smalzried, Brush Foundation.*

Psychologists in a child guidance clinic try to discover whether their contribution will be more useful if they minimize formalized testing and increase the formal, observational aspects of their function. To do this, an uncompleted intelligence test is used for those children who are at least of average I.Q. range but not genius; i.e., a range of 100 to 130.

Personality Profiles of Psychoneurotics before and after Treatment. *Helen Shacter, Veterans Rehabilitation Center, Chicago.*

Minnesota Multiphasic Personality Inventory profiles were obtained for a group of hospitalized psychoneurotic veterans. Successive test administrations were 1) upon admission 2) when ready for discharge, and 3) again several months after normal work activity had been resumed. Comparative graphs show general consistency of patterning, and

in a majority of cases maintenance of adequate adjustment.

A Proposed Classification of Fundamental Psychotic Behavior Reactions. *Mary Phyllis Wittman, Elgin State Hospital.*

A classificational schema for what appear to be three fundamental types of psychotic behavior reaction and the rationale for such a schema. The behavior reactions are described in numerical terms giving the relative weighting for each of the three components. The classification readily lends itself to research and to statistical analysis of results.

Sex Differences in Doll Play Aggression. *Pauline Snedden Sears and Margaret Holding Pinler, University of Iowa.*

Analysis of the direction and content of phantasy aggression appearing in the doll play of young children shows distinct sex patterning. Girls place the girl and baby dolls relatively frequently in situations where they are recipients of aggression, while boys put the father doll most often on the receiving end.

A Combined Projective and Psychogalvanic Response Technique for Investigating Certain Affective Processes. *Homer L. J. Carter, Western Michigan College.*

A combined projective and psychogalvanic response technique was used in studying the reactions of three groups of subjects. Changes in palmar skin resistance, reaction time, and actual responses of examinees to incomplete sentences were considered. The technique may be of value in investigating nature and intensity of emotional conflict.

A Case of Extreme Language Disability Concealed by Stuttering. *Milton B. Jensen, Louisville, Ky.*

A 21-year-old woman developed stuttering at age 10 or 11, apparently to conceal the fact that she could not read and speak many words common to her age group. She was able to complete high school and hold a responsible clerical position. Instruction in reading and vocalizing has been accompanied by cessation of stuttering, without direct attack upon the stuttering itself.

Psychological Diagnosis and Treatment of Aphasia.

Maurice H. Kroul, Chicago Psychological Institute.

This is a study of disturbed capacity for symbolic thought, expression, and communication due to traumas, neoplastic growths, vascular insults, and C.N.S. lues. Diagnosis was based on Rorschach, Wechsler-Bellevue, and specialized tests. Re-tests determined course of treatment and discharge. A new conception of aphasia is indicated by these data.

The Results of Intelligence Tests on 240 Hospitalized Epileptics. *Homer B. Reed, Fort Hays Kansas State College.*

An individual intelligence test was given to each of 240 epileptics, C.A. 5-40, in a Kansas state hospital. The results were a median mental age of 6 years for the entire group, a small increase in M.A. between C.A. 5 and C.A. 20, no decline in median M.A. between C.A. 20 and C.A. 40, more scatter among epileptics than normals, and most failures in tests requiring the detection of something foolish.

Friday, May 2, 9:00 A.M.

SECTION B. DONALD G. MARQUIS, *Chairman*

Cortical Lesions Show the Functional Relationships among Ipsilateral and Contralateral Pyramidal

Tracts as They Function in Bilateral Learned Responses. *P. S. Shurrager, Illinois Institute of Technology.*

Specific unilateral lesions, in Brodman's Area 4 of dogs, cause: (1) failure of learned (conditioned) flexion of contralateral musculature, and (2) failure of learned ipsilateral extensor musculature. Results are a function of the size of the lesion.

The response learned may be opposite to the UCR. The CR pattern is primarily dependent upon the patterns of bilateral Area 4.

EEG Relationships to Five Autonomic Variables.

Charles E. Henry and Chester W. Darrow, Institute for Juvenile Research, Chicago.

Motor area EEG dimensions of frequency, amplitude, and pattern show relationships to autonomic functions independently expressed as systolic blood pressure, heart rate, palmar conductance, recovery-reaction quotient to stimulation, and palmar reaction to hyperventilation. Failure thus to subdivide these data obscures correlations.

Relation of Electroencephalographic to Palmar Galvanic Indications of Cortical Function. *Chester W. Darrow and Charles E. Henry, Institute for Juvenile Research, Chicago.*

Differences between amplitudes of motor unipolar (scalp to ear lobe) and motor-parietal bipolar EEGs provide clues to cortical-cortical as compared with cortical-subcortical potential differences relating to palmar conductance change, galvanic recovery-reaction quotient, and conductance level. Evidence regarding psychological correlates is presented.

Motor Components of a Sensory Response. *R. C. Davis, Indiana University.*

In the action potentials from the forearms two responses to an auditory stimulus are detected. The first is modified by stimulus intensity and adaptation; the second is apparently not affected by either. Both are modified in size and in form by induced tension and show an exact relation to it.

Some Observations on the Nature of Cortical Integration and in Sensorimotor Coordination and Thinking in Man. *Karl U. Smith, University of Wisconsin.*

Among different types of reaction times measured (simple reaction times, crossed and uncrossed visual

discrimination times, and controlled word association times), simple reaction times were the only values significantly increased after section of the inter-cortical neurones. The results suggest a theory of general neural organization within the cortex as a basis of sensorimotor coordination and word association.

A Preliminary Study of a Quantitative Measure of Flexibility in Human Thinking. *Esta A. Berg and David A. Grant, University of Wisconsin.*

This experiment was designed to explore the relationship between degrees of confirmation of correct "hypotheses" and readiness to shift these "hypotheses." It combined the Weigl-Goldstein-Scheerer abstract behavior concepts with techniques evolved at the Wisconsin Primate Laboratory. Increased reinforcement of the "hypotheses" facilitated ability to shift "hypotheses."

Analysis of the Influence of Set on Problem-solving Ability. *Harold Guetzkow, University of Michigan.*

The hypothesis that susceptibility to set is empirically distinguishable from the ability to surmount set was derived from sex differences obtained in Luchin's series of volume-measuring problems. This differentiation was confirmed by other tests of problem-solving ability and perseveration, and by demonstration of the summative effect of the two factors.

National Differences in Creativity. *Harvey C. Lehman, Ohio University.*

This study presents findings that have been obtained by: (1) taking a fair sample of creative works which are regarded by experts within each separate field of endeavor as of outstanding importance, and (2) ascertaining the number thereof that have been made by individuals of various nationalities.

Friday, May 2, 9:00 A.M.

SECTION C. HERBERT WOODROW, Chairman

The Role of a Selective Diary in Counseling. *James R. Patrick, Ohio University.*

Since perseverative ideas and feelings continue in the client between counseling sessions, it is suggested that the client jot down recurring troublesome ideas in relation to situations in a diary fashion for review at a future counseling session. Situations, if

purposeful, are excellent reminders and may structure for effective recall. Some evidence supports this technique.

The Intellectual Demands of the Various Curricula in a University. *Gaige B. Paulsen, Ohio University.*

A study of 757 graduates of Ohio University was made to compare the distributions of scores on the Ohio State Psychological Examination for the various schools. The varying demands of the different college curricula are revealed by the comparison of the cumulative distribution of the percentages of percentile ranks on OSPE.

Problem Solving Behavior in Conflict Situations. *Robert H. Seashore, Northwestern University.*

A systematic classification of known problem solving methods to be used in diagnosing difficulties of personal adjustment and discovering alternative methods more suitable to the situation. Used in career planning and clinical counseling, and in constructing a profile of temperament.

A Two-Year Course in the Life Sciences. *Clarence Leuba, Antioch College.*

Man is studied in connection with both the internal environment described by biologists and the external environments described by anthropologists. The emphasis is on coherence, unity, and thoroughness. Universals in human nature and basic principles are stressed in the first year; individual differences and applications in the second.

The Use of Adjustment Inventory Items in Selection of Scholarship Candidates. *Joseph C. Heston, DePauw University.*

Scales for each sex have been derived from adjustment inventory items, to aid in the selection of university scholarship candidates. The items have been validated from criterion groups composed of pairs matched in high ability level and widely differentiated in academic achievement. Validity on other groups has been evaluated.

A Comparison of the Regression Equation and the Prediction Formula for Predicting College Success or Failure. *C. H. Ruedisili, University of Wisconsin.*

Predicted grade-point averages based on the re-

gression equation or on a special prediction formula (that extends the predictive range) are compared with actual grade-point averages of college freshman men, using only the ends of the predicted distribution. The regression equation gives "better" predictions, and now is the one used.

Some Anxieties of Present-Day College Men and Women. *C. W. Crannell, Miami University.*

Nineteen men (mostly veterans) and 34 women students were required to respond to the stimulus word, "worry," with 99 successive, written associations. The most frequent classifiable responses by the men dealt with the war; the most frequent type by the women related to academic standing.

Personality Factors in the Psychological Weaning of College Women. *Arthur W. Sherman, Jr. Ohio University.*

The questionnaire formerly used for measuring the emancipation status of older adolescents was revised and administered to 504 college women, results being compared with certain scales of the Bernreuter and Minnesota Multiphasic Personality Inventories. Parents of students in most and least emancipated groups were also studied. Factors related to achievement of emancipation are considered.

Friday, May 2, 9:00 A.M.

SECTION D. EDVIN BRYE, *Chairman*

The Effects of Mild Anoxia on Improvement with Practice in Three Simple Skills. *Roger W. Russell, University of Pittsburgh.*

Controlled observations have been made of the effects of mild anoxia on improvement with practice in three simple skills (arm-hand coordination, finger-dexterity, simple addition). The equated control and experimental groups consisted of 244 male Ss. Despite a decrement in absolute level of performance, improvement did occur during the anoxic period.

The Effect of Reliability of Reported Score on Learning. *Delos D. Wickens, Ohio State University.*

Three groups of Ss were given 12 trials on a pursuit-rotor. Scores were reported after each trial. Group 1 was told their actual score, Group 2 a score distorted by an added error, Group 3 a score unrelat-

ted to their actual performance. Superior reliability did not result in superior learning.

Retroactive and Proactive Inhibition after Five and Forty-eight Hours. *B. J. Underwood, Northwestern University.*

The recall of both of two contiguously learned paired-associate lists was determined after five and 48 hours. The results show that the recall of the second list is greater than the first after five hours, but that the two lists are equally well recalled after 48 hours.

Whole Versus Part Practice in a Complex Motor Task. *Earl D. Schubert and Don Lewis, University of Iowa.*

In a three-part motor task, practice could be given on any one of the three parts separately, or on any two of them in combination, or on all three together. One-part practice resulted, during test trials, in inferior performance on the complex task, but complex performance following two-part practice did not suffer by comparison with performance following whole practice throughout.

Positive and Negative Transfer in Motor Learning. *Don Lewis, University of Iowa.*

Negative transfer (associative interference) in a complex motor task has been demonstrated, along with the more commonly demonstrated positive transfer. Evidence for marked individual differences in susceptibility to transfer was found. Explanations were formulated for the failure of previous investigators to find clear proof of negative transfer in motor learning.

Intra- and Inter-day Learning of a Psychomotor Reaction. *Arthur J. Riopelle, University of Wisconsin.*

Twenty-three male sophomores were allowed four two-minute "self-paced" trials on the Vector Complex Reaction Time Apparatus for ten days. Daily means and sigmas increased. First day total scores correlated +.86 with second day scores, and +.54 with tenth day scores. Initial slope was independent of initial skill.

The Relationship of Verbalization and Remote Association. *W. J. Richards and R. H. Waters, University of Arkansas.*

Spearman has suggested the possibility that remote associations are a function of the verbalization of *S* during learning. Specifically, he suggests that under conditions of verbalization more forward than backward associations should be formed.

This hypothesis is not supported by the data of this study.

The Rate of Change in Learning to Learn Verbal Nonsense Material. *Isabel Stewart and P. S. Shurrager, MacMurray College and Illinois Institute of Technology.*

Each equated list (1-20) of nonsense syllables tachistoscopically presented according to a rotary-anticipation technique was learned to completion. Some individuals learn to learn a list of ten syllables in one or two repetitions.

Repetitions required in successive lists show a decrease in the variability as difficulty decreases.

Friday, May 2, 1:15 P.M.

SECTION A. ARTHUR W. MELTON, Chairman

Mechanomorphism: A New Term for an Old Mode of Thought. *R. H. Waters, University of Arkansas.*

The term *Mechanomorphism* is suggested to designate a mode of thought running through the history of psychology. It designates that theory which takes the machine as the standard of interpretation and explanation. Mechanomorphism as a label should have coordinate value with Anthropomorphism, of which it is the precise antonym.

An Experiment on the Genuineness of Unilateral Deafness Produced by Hypnosis. *Frank A. Pattie, Rice Institute.*

The genuineness of the apparent deafness of one ear produced by suggestion was tested by presenting two tones of nearly the same frequency separately to the ears. If *Ss* reported hearing a beating tone, the deafness was obviously not genuine. In all *Ss* tested this was the case. *Ss*'s behavior, if shown by unhyponotized *Ss*, would be considered malingering.

Relaxation Training of Flyers in the United States Navy—Preliminary Report Based on Neufeld's "Brief Evaluation of the Relaxation Training Program." *Edmund Jacobson, Chicago.*

During the war, signs of excess strain appeared in many cadets. Relaxation training was begun in pre-

flight schools, under officers instructed in the writer's laboratory. 15,000 cadets received instruction, resulting in lowered fatigue-tension ratings, reduced percentage of injuries, and better sleep as compared with controls. Cadets reported various subjective benefits.

Weight as a Factor in Transfer Time of Movement over Various Distances. *R. L. Chapman and H. F. Buegel, University of North Dakota.*

In altering two of the mechanical factors affecting transfer time of arm movement, it was found that a stable increase in transfer time is obtained by increasing both transfer weight and transfer distance. The existence of other factors was detected.

Behavior Situations in Student Adjustment. *Earle E. Emme, Bowling Green State University.*

This study emphasizes the wide-spread interest in psychological information. Adjustment-behavior, of a deliberative nature, especially when the individual reacts constructively in his life-situation, gives the base for four forms of adjustment-behavior: withdrawal; misrepresentation; compensation; and reality facing. Dangers are pointed out in the unwarranted use of this classification.

Saturday, May 3, 9:00 A.M.

SECTION A. FORREST A. KINGSBURY, Chairman

Some Problems in Clinical Psychological Testing. *Roy Schafer, Menninger Foundation.*

Three crucial problems in clinical testing will be discussed: (1) the hazards of increasing depth of interpretation; (2) the difficulty in distinguishing indications of character make-up from indications of symptom formation; (3) the difficulty in assessing *Ss* of borderline adjustment.

An Evaluation of a Short Administration of the Revised Stanford Binet. *R. K. Meister and Virginia Kennedy, Mooseheart Laboratory for Child Research.*

I. Q. scores obtained by determining an M.A. limen are compared with those obtained in the conventional manner for 100 cases. The results indicated that the limen-form I.Q. is sufficiently comparable to the full scale I.Q. for most clinical purposes and reduces administration time two-thirds.

Some Abbreviated Intelligence Scales. *W. A. Hunt, S. G. Klebanoff, I. N. Mensh, and M. Williams, Northwestern University.*

Several of the abbreviated intelligence scales so widely used in the military services were administered to 528 naval recruits representing a wide sampling of intelligence. The results are presented in terms of internal analysis, intercomparison of the tests, and validation against the Navy General Classification Test.

A Comparison of Two Measures of Deterioration in Psychotics. *Ann Magaret and Mary Simpson, University of Wisconsin.*

A low correlation was obtained between the deterioration indices of the Shipley-Hartford Scale and the Wechsler-Bellevue Intelligence Test on a group of mental hospital patients. Lack of agreement with psychiatrist's ratings suggests that factors other than conventional test performance must be included in a quantitative measure of deterioration.

An Appraisal of Wechsler-Bellevue Scatter Patterns in Schizophrenia. *Sol L. Garfield, Mendota VA Hospital.*

The W-B records of 67 schizophrenic and 46 hospitalized control patients were analyzed. Several diagnostic criteria offered for schizophrenia by Wechsler, Rabin, and Rapaport were not substantiated. A large amount of similarity between the two groups, as well as variability within each group, was observed.

A Method for Identifying Pattern Clusters in Test Score Profiles. *D. G. Ellson, Indiana University.*

Scores on a series of tests are converted to rectangular distributions (e.g., quintiles). Differences (D_p) between profiles are then determined as the sum of the absolute differences between corresponding scores on two profiles. A high proportion of low values for D_p identifies a prototype for a pattern cluster.

Comparison of the Results of the Kuhlmann Tests of Mental Development and the Revised Stanford-Binet, Form L in Normal Children. *J. L. Yager, Hines VA Hospital.*

Mean performance of 120 children aged 6-16 on the Stanford-Binet, Form L, was higher than on the Kuhlmann Tests of Mental Development, though

the differences were not significant. Correlation between the test scores was $.80 \pm .03$. Analysis on the basis of age, intelligence levels, and intervals between the tests yielded the same general results.

Saturday, May 3, 9:00 A.M.

SECTION B. WAYNE DENNIS, *Chairman*

A Skeptical Note on the Use of Attitude Scales Toward War. *Stanford C. Ericksen, Vanderbilt University.*

Results of the Thurstone-Peterson Attitude Toward War Scale administered during 1940, 1941, 1942, and 1946 were interpreted as indicating that the attitude object measured by this scale is highly abstract and does not give a meaningful picture of contemporary war attitudes.

Changes in Certain Attitudes, their Nature and Causes. *A. R. Gilliland, Northwestern University.*

Attitudes toward Germany, Japan, Russia, and England were measured by attitude scales and interviews during and following the war. Also attitudes toward the president, congress, etc. Directions and consistency of trends were analyzed and compared with historical events.

Three Methods of Analyzing Dreams. *Calvin S. Hall, Western Reserve University.*

Three methods of analyzing dreams for the purpose of diagnosing certain aspects of personality are described. These methods are content analysis, content interpretation and content translation. Exact procedures, and illustrations taken from a large sample of dreams, are discussed.

Personality and Parent Behavior. *Joan Kalthorn, Fels Research Institute.*

An analysis of the parent behavior of mothers who received high scores on the Minnesota Multiphasic Personality Inventory, as contrasted with a group receiving low scores, revealed that both groups differed from the average in parent behavior, primarily on the behavior cluster indulgence.

Changes in Parent Behavior during Childhood. *Alfred L. Baldwin, Fels Research Institute.*

From an analysis of parent behavior, the home environments of the children in the Fels study are

seen to decrease in warmth and intellectual stimulation but increase in restrictiveness as the child grows older. One of the important factors in the change is the birth of a younger sibling.

A Demonstration of P-technique in Determining Personality Structure. *Raymond B. Cattell, University of Illinois.*

P-technique—factorization within one person—should yield the same source traits as R-technique, save for the departure of unique from common traits. Data for 43 variables (objective, behavior rating, questionnaire), measured daily for one person, factorized to five source traits, which were identifiable with those from R-technique.

Laboratory Tests of Opinion Sampling Techniques. *Norman C. Meier, University of Iowa.*

With a city-wide housing survey providing known characteristics of the universe, samples drawn in the laboratory with aid of maps and accessory data permitted comparison of paired samples by area method and by quota-control methods. Measures of the validity and adequacy of such distributions were reported.

An Experiment in Opinion Polling with Mark-Sensed Punch Cards. *H. H. Remmers and N. L. Gage, Purdue University.*

Problems in the design and execution of opinion polls by means of mark-sensed punched cards are described; they are discussed in terms of experience of the Purdue Opinion Poll for Young People. Results of such poll analyses in terms of speed and accuracy are reported.

Saturday, May 3, 9:00 A.M.

SECTION C. *J. R. KANTOR, Chairman*

Rate of Running and Rate of Learning as Related to the Palatability of the Food Reward. *P. T. Young, University of Illinois.*

Rats run faster in approaching a good food than in approaching a bad food, but we have not been able to demonstrate that they learn faster for one food than for another. The level of performance depends upon motivation (palatability) and learning (practice).

Spatial Orientation in the White Rat. *H. C. Wilcoxon and R. H. Waters, University of Arkansas.*

Rats were trained to go left on a double-T, elevated maze with curved starting positions. On critical trials, 16 were presented short-cuts to the "correct" food platform, 16 to the "incorrect." Each short-cut involved a right turn. Results are given theoretical interpretation.

An Experimental Study of the Relation Between the Shape of the Learning Curve and Delay of Reward in Maze Learning. *C. C. Perkins, Grinnell College.*

Five groups of white rats were run in a single choice maze, with both reward and non-reward delayed for 6, 12, 18, 24 or 30 ft. No correction was allowed. Shapes of learning curves varied for the different groups, with an increase in delay distance, from negative acceleration to an initial positive acceleration.

Development of a Discrimination without Differential Reinforcement of a Specific Response. *William K. Estes, Indiana University.*

An originally neutral stimulus which has repeatedly preceded the presentation of a reinforcing stimulus (e.g. food) will exert discriminative control over any operant response subsequently conditioned by means of that reinforcing stimulus.

The Effect of a Secondary Reinforcing Agent on Simple Black-White Discrimination Learning. *David Ehrenfreund, University of Iowa.*

Two groups of rats were trained to white-positive vs. black-negative. An empty food cup was placed in the negative box for one group but not for the other. The former group took approximately twice as long to learn. The principle of secondary reinforcement is invoked to explain the difference.

"Superstition" in the Pigeon. *B. F. Skinner, Indiana University.*

If food is repeatedly presented to a hungry pigeon by a clock which has no connection with the bird's behavior, operant conditioning will take place. A "superstitious" response emerges from the characteristic behavioral repertoire in the experimental situation and develops considerable strength. The response can be extinguished and reconditioned.

An Experimental Demonstration of a Motivational State Resulting from Non-Reward. *John H. Rohrer, University of Oklahoma.*

Two groups of rats were given 60 reinforcements of a bar-depressing response and then two extinction series. During the first extinction the interval between trials was varied; its effect was measured during the second extinction. Results are interpreted as offering evidence of a motivational state resulting from non-reward.

Saturday, May 3, 1:15 P.M.

SECTION A. *DELOS D. WICKENS, Chairman*

Counter Conditioning and Verbal Instructions as Factors Influencing the Conditioned Eyelid Response. *E. B. Norris, D. A. Grant and J. P. Hornseth, University of Wisconsin.*

The effect of inhibitive and passive instructions, and counter conditioning in the form of a shock, on the conditioned response of the eyelid to light was studied. It was found that, with the sensitization of the beta-response controlled, instructions significantly affected the CRs.

Dark Adaptation and the Pseudo-conditioned Eyelid Response. *D. A. Grant, E. B. Norris, and S. Boissard, University of Wisconsin.*

Results from 80 human Ss show that previously reported changes in eyelid responses during pseudo-conditioning procedures should not be attributed exclusively to pseudo-conditioning reinforcement. It is indicated that the earlier findings consisted primarily of the sensitization of the beta-response of the eyelid to light. The sensitization occurred during dark adaptation.

The Course of Backward Conditioning. *W. N. Kellogg and Alice Spooner, Indiana University.*

The "backward conditioning" of finger-withdrawal by the buzz-shock method shows a diametrically opposite trend from that found in forward conditioning. Instead of giving typical learning or conditioning curves, the backward procedure gives curves of extinction or of negative adaptation—the CRs which occur being concentrated in the early trials.

Sensory Pre-conditioning of Human Subjects. *W. J. Brogden, University of Wisconsin.*

Ss were given trials of tone and light while waiting for the E. After making reaction-time responses to light, these Ss responded with reliably greater frequency to tone than did control Ss given (a) only training trials to light and (b) trials of tone and training trials to light.

Intensity of the Conditioned Stimulus and the Strength of Conditioning. *D. E. Schneider and D. A. Grant, University of Wisconsin.*

Four lights of varying intensities were used to determine the effect of the CS intensity on the strength of conditioning. The analysis of variance design permitted investigation of other effects of variation of the CS. No systematic variation in strength of conditioning was demonstrated, and response strength was not significantly affected.

Effects of Pre-testing with the Conditioned Stimulus upon the Extinction of the Conditioned Eyelid Response to Light. *H. W. Hake, D. A. Grant and D. E. Schneider, University of Wisconsin.*

Pre-testing with the CS alone produced an extinction curve with an upward trend following the usual initial drop. This, however, was not significantly different from the monotone-decreasing control group curve. Eyelid CR's to light under light-adapted conditions were confined to a latency range of 250-500 msec.

Sensitization of the Beta Response as Affected by Verbally Induced Inhibitory Set and Counter-reinforcement. *J. P. Hornseth, D. A. Grant and E. B. Norris, University of Wisconsin.*

Inhibitory instructions reduced the magnitude of both the primary reflex and the beta-response of the eyelid to light, but did not significantly decrease the frequency of either response. Counter-reinforcement produced no significant effects on the magnitude or frequency of either response. Reflex character of the beta-response is thus suggested.

Saturday, May 3, 1:15 P.M.

SECTION B. *A. R. GILLILAND, Chairman*

Nominating Technique as an Aid in Establishing Criteria of Leadership. *A. C. Van Dusen and R. L. Sholke, Northwestern University.*

Using nominations, with reason, of the most and

the least wanted members for Patrol Leader positions in Boy Scout Troops, an attempt is made to establish a method of developing criteria and an operational working definition of leadership behavior.

The Derivation and Validation of a Generalized Visual Skill Profile for Close Jobs. *Joseph Tiffin and N. C. Kephart, Purdue University.*

Visual skill profiles for over 500 specific industrial jobs have been constructed from data sent to the Occupational Research Center at Purdue University. The present paper summarizes an investigation in which 450 of these visual skill profiles have been analyzed to derive a generalized profile for close jobs.

Shortened Methods of Job Evaluation. *Brent Baxter, Toledo.*

Shortened methods of job evaluation have been suggested by factor and multiple correlation analysis of job rating data. Additional data corroborate the presence of only two or three basic factors, but a satisfactory multiple regression equation using only a few rated factors was not obtained.

Construction and Use of Weighted Check List Rating Scales in Two Industrial Situations. *Edwin B. Knauff, State University of Iowa.*

The method of equal-appearing-intervals was used in constructing a merit rating scale for laundry press operators and one for retail bake shop managers. Reliabilities of .87 and .81 were obtained and the

scales were found to be satisfactory as criteria of worker performance.

Changes in Applicant Qualifications Following the Installation of Employment Tests in Industry. *Eleroy L. Stromberg, Cleveland College.*

Test scores for successive samples of applicants for productive jobs, where employment tests have been installed on the basis of the present population, indicate that the measured qualifications tend to become more desirable from one period to the next. Implications for industrial consulting are discussed.

The Purdue Mechanical Adaptability Test. *C. H. Lawshe, Jr. and Joseph Tiffin, Purdue University.*

The method of construction, reliability, and validity of the Purdue Mechanical Adaptability Test are discussed. Relationships between scores and with other tests (including measures of general mental ability) will be presented, with a statement of possible usefulness for guidance and industrial selection purposes.

Improvement in the Performance of Card Stapling through the Analysis of Therbligs. *Charles S. Dewey, Chicago.*

The study concerns the improvement in the performance of card stapling through the operator's analysis of photographic records of eighteen therblig units over a ten-day period. The average improvement per therblig unit for the right hand was 16 per cent and for the left hand, 23.5 per cent.

PROCEEDINGS OF THE EIGHTEENTH ANNUAL MEETING OF THE EASTERN PSYCHOLOGICAL ASSOCIATION

J. McV. HUNT, *Secretary*

Institute of Welfare Research

Community Service Society of New York

THE Eastern Psychological Association met for the eighteenth annual meeting at the Chalfonte-Haddon Hall in Atlantic City, N. J. on April 25 and 26, 1947. Bernard F. Riess chaired the committee on local arrangements, which also included Roy B. Hackman, in charge of projection, and James Diggory, in charge of exhibits. Those attending the meeting numbered 591, which is considerably smaller than the 876 who attended at Fordham last year. Of those attending, 241 were members, and 350 were guests many of whom were also applicants for membership.

The program comprised 47 fifteen-minute papers, two films plus a repeated exhibition of films from the Psychological Cinema Register, a round table on *Human Engineering* and another on *Recent Statistical Developments*, the presidential address by Anne Anastasi, and a meeting of the whole addressed by F. S. C. Northrop of Yale University (see below).

The program committee, composed of Leo Crespi, Wallace Wulfeck, J. McV. Hunt, ex-officio, and Francis W. Irwin, chairman, classified the 47 papers into eight topical sessions (see program below). Two sessions each were devoted to *Personality and Clinical* (11 papers) and to *Personnel and Tests* (10 papers). The other topics were: *Audition* (5 papers), *Comparative* (6 papers), *New Laboratory Course at Columbia University* (3 papers), *Social* (5 papers), and *Vision* (7 papers).

PRESIDENTIAL ADDRESS

Friday evening was devoted to the presidential address and the business meeting. Henry E. Garrett introduced Anne Anastasi, president of the Association, who spoke on *The Nature of Psychologi-*

cal Traits. Dr. Anastasi pointed out that the wide diversity of trait concepts in present-day psychology is the result of an underlying methodological limitation which has characterized not only trait studies but many other types of psychological investigations as well. The trait investigator has usually asked *what* is the organization of behavior or *what* are the traits into which the individual's behavior repertory can be classified rather than asking *how* does behavior become organized and *how* do psychological traits develop. Much of the content of psychology—including trait theories—still consists of generalized factual descriptions rather than principles of behavior. It represents a cataloging of responses within a specific (although not usually specified) setting, without responses to the conditions which bring about such responses. The apparent inconsistencies in the findings of factuo-descriptive investigations of traits can themselves point the way towards the understanding of the way in which behavior becomes organized. Thus, it is suggested that the greater consistency and ease of identification of traits in the intellectual as contrasted to the emotional sphere illustrates the greater cultural standardization of behavior in the former category. Similarly, the comparison of traits which have been identified among groups differing in age, education, occupation, sex, cultural milieu, and species contributes towards a clarification of the underlying principles of trait development and presents a fruitful field for future research. A more direct approach is the experimental manipulation of behavior organized through the interpolation of relevant controlled activities. In summary, Dr. Anastasi presented the problem of psychological traits as but one example of the need

for a more active search for the underlying principles which unify the superficial divergencies of the descriptive approach in psychology.

AT THE ANNUAL BUSINESS MEETING

1. The proceedings of the 1946 meeting, as printed in the *AMERICAN PSYCHOLOGIST*, October, 1946, were accepted.

2. The reports of the secretary and of the treasurer were accepted, and a budget for 1947-48 totaling \$1,175 was approved.

3. Dr. Irwin, chairman of the Program Committee, reported in part that only 54 abstracts of papers for the 1947 meeting, as compared with over 70 for 1941 or the last meeting before the war, had been received, that two were withdrawn, and after careful examination, five of these abstracts were rejected upon unanimous agreement of the four members of the committee, that, although abstracts had improved, as many as 23 were judged "doubtful" or "reject" by one or more members of the committee, and that some of the most competent members of our Association fail to invest the time and care in the preparation of abstracts which will enable a committee to judge them with confidence. Report accepted.

4. Dr. Riess, chairman of local arrangements, reported the fine cooperation afforded by the hotel management and the advantages of meeting in a hotel, and then he pointed to the greater advantages of meeting under academic auspices. His report was accepted, and his committee discharged with the appreciation of the Association.

5. Dr. Seashore, secretary of the Committee on Professional Ethics, composed otherwise of Robert Brotemarkle, Irving Lorge, Dorothea McCarthy, and Walter Miles, chairman, read a report wherein it was pointed out in part that "the Eastern Psychological Association is primarily a regional society of psychologists organized for the promotion and exchange of scientific research and professional thought," that "it does not seem appropriate to expand the present conception of the EPA to include *operating functions* more appropriately handled by other organizations, specifically by the national body or by the state associations."

The resolution of the committee read: (1) that the Eastern Psychological Association should not establish a permanent Committee on Professional

Ethics at this time; (2) that the Board of Directors be charged with responsibility for handling any problems of an ethical character which might be brought to the attention of the Eastern Psychological Association; (3) that this report be transmitted to the proper executives and committee chairmen of the American Psychological Association with a covering letter which emphasizes the urgency felt by the membership of the Eastern Psychological Association for positive action along two lines: (a) the formulation and publishing of a code of professional ethics for psychologists, and (b) the activating of a satisfactory judiciary procedure for handling of cases of alleged professional misconduct; and (4) that the Board of Directors take appropriate action if an Eastern Psychological Association member should ever be censured by or dismissed from the American Psychological Association or any state organization.

This resolution, already approved by the Board of Directors, was accepted, and the Committee discharged with thanks.

6. *Elections*: In the absence of Professor Boring, chairman of the Election Committee, Dr. Stevens, the other member, read a humorous report describing the election machinery and the number of ballots received, and giving the statistical reliability of the election results. The minimum number of votes placing nominees on the election ballot for both president and director was seven.

Officers were elected to serve as follows: *President*, (1947-48), J. McV. Hunt, Director, the Institute of Welfare Research, Community Service Society of New York; *Secretary*, for the remainder of the term of J. McV. Hunt, (1947-49), Harold Seashore, Director, Tests Division, Psychological Corporation; *Treasurer*, (1947-50), Weston A. Bousfield, University of Connecticut, to replace Lyle H. Lanier who has served the Association as treasurer for 6 years; *Directors*, (1947-50), O. Hobart Mowrer, Harvard University and Helen Peak, Connecticut College.

7. *Appointments*: The Board of Directors appointed as new member of the Program Committee (1947-50), Richard Crutchfield, Swarthmore College; for the Auditing Committee (1947), William D. Orbison and Weston A. Bousfield, chairman; as representatives on the Council of the A.A.A.S. (1947-48), Elaine Kinder and (1947-49) Herbert

W. Rogers; for chairman of the Committee on Local Arrangements (1947-48), Roy B. Hackman, Temple University.

8. *New Members and Membership Requirements:* In presenting the applicants recommended by the Board, the secretary described the method of scrutiny employed by the new Membership Committee, composed of Rose G. Anderson and Weston A. Bousfield, and the decision of the Board concerning the requirements for membership. Although the By-Laws of the Association have been geared to the requirements for Associateship stated by the old American Psychological Association and the American Association of Applied Psychologists, our automatically following the change from one to two years of graduate study in Psychology, or to one year of graduate study and one of professional experience, made by the reorganized American Psychological Association, would constitute an upward revision of our requirements for membership without any action on the part of the Board or the Members. In the Board's discussion, it was agreed that one of the chief values of a regional association is the opportunity it affords graduate students to present research papers and to participate as scientific researchers. It was also agreed that the function of a regional association is scientific rather than professional. With these considerations in view, the Board voted unanimously to recommend that the minimal requirements for membership in the Eastern Psychological Association should continue to be one full year of graduate study of psychology at an accredited university or college. Associates and Fellows of the American Psychological Association should continue to be accepted for membership in the Eastern Psychological Association automatically. This recommendation will require a clarifying amendment to the By-Laws at the next Annual Meeting.

Of 166 applicants, 10 were rejected for lack of one full year of graduate work. The 156 applicants whose names had been posted on the bulletin board were recommended by the Board and accepted by the Members. This raises the membership of the Association to 918.

9. The secretary also reported the following actions of the Board of Directors:

a. In answer to a request that Association publish and circulate a certificate of membership suitable

for framing in a professional office, it passed the resolution: "Be it resolved that since the Eastern Psychological Association is a regional scientific association of psychologists rather than a professional organization of psychologists, and since the Association exists primarily to conduct its scientific meeting and is little concerned with setting professional service standards, it would be inappropriate and undignified for the Association to publish a certificate of membership suitable for framing in a professional office."

b. In view of the imperfection of abstracts as they are now presented to the Program Committee abstracts for the 1947 and 1948 meetings will not be published.

c. The annual meeting for 1948 will take place at Temple University on Friday and Saturday, April 16 and 17.

10. *The financial statement* for the fiscal year 1946-47, prepared by the Treasurer, Lyle H. Lanier, and verified by the Auditing Committee, composed of Weston A. Bousfield and W. D. Orbison, is as follows:

FINANCIAL STATEMENT AS OF MAY 1, 1947

For the Fiscal Year 1946-47

INCOME

Membership Dues	
Dues for the current year (1946-47) ..	\$636.00
Arrears	83.00
Advance payments	3.00
Guest Fees	352.00
Interest on Savings Account	30.66
Total Income	1104.66

EXPENDITURES

Publication of Proceedings	38.25
Office of the Secretary	306.30
Office of the Treasurer	155.00
Printing and Stationery	230.30
Postage	89.66
Program Committee	24.89
Lecture Fee	100.00
Local Expense, Atlantic City (1947)	139.24
Traveling Expenses of Officers	17.61
Miscellaneous Supplies & Expense	36.29
Total Expenditures	1137.54
Deficit for 1946-1947	32.88

BALANCE SHEET

Cash: Fifth Avenue Bank of New York . . .	905.84	
New York Savings Bank	2063.97	
Petty Cash (Secretary)	20.00	
Petty Cash (Treasurer)	20.00	
Total Cash		3009.81
Capital: As of May 10, 1946	3042.69	
Deficit for 1946-1947	32.88	
Total Capital		3009.81

PROGRAM

Friday Morning

PERSONALITY AND CLINICAL: I

Chairman: Donald W. MacKinnon, Bryn Mawr College

An Analysis of some Basic Concepts of Psychotherapy. *Leopold Bellak, M.D., New York Medical College.*

A One-hour Psychodiagnostic Interview: An Analysis of 500 Cases Seen in Consultation with Psychiatrists and Internists. *M. Harrower.*

The Veterans Administration Personal Adjustment Counseling Program. *Marion R. Bartlett, Advisement and Guidance Service, and John L. Yale, Veterans Administration.*

The Psychologist's Role and Responsibility in the Clinical Teamwork. *Elisabeth F. Hellersberg, Institute of Human Development. N. Y.*

Effects of Shock Therapy on Performance on the Word Association Test. *Jean Zeaman, N. Y. Psychiatric Institute* (introduced by Joseph Zubin).

Some Aspects of the Personality of Male Juvenile Delinquents. *Dennis J. Bultimore.*

PERSONNEL AND TESTS: I

Chairman: John G. Jenkins, University of Maryland

The Measured Interests of Nurses. *Frances Orland Triggs, Educational Records Bureau.*

A Scale for Judging Change in the Clients of Social Case Work. *J. McV. Hunt, Institute of Welfare Research, Community Service Society of New York.*

What is Mechanical Comprehension? *Frederick B. Davis, Office of the Air Surgeon, Army Air Forces.*

A Brief Description of a Reliable Criterion of Job Performance. *Leonard W. Ferguson, Metropolitan Life Insurance Company.*

Psychological Factors Associated with Pilot-Error Aircraft Accidents. *Richard H. Henneman and Howard J. Hausman, Headquarters, Strategic Air Command.*

COMPARATIVE

Chairman: Richard S. Crutchfield, Swarthmore College

"Tempo" of Activity as a Measure of Social Interaction. *Elaine F. Kinder, Rockland State Hospital and Yerkes Laboratories of Primate Biology.* Conditions in Which Escape from Punishment Reinforces Responses Leading to That Punishment. *Gordon T. Gwinn, Yale University* (introduced by Neal E. Miller).

The Temporal Gradient of Retrograde Amnesia Induced by Cerebral Electroshock in the Rat. *Carl P. Duncan, Brown University.*

Amount and Direction of Transfer as a Function of Placement of Subgoal. *George M. Haslerud, University of New Hampshire.*

A Study of the Motivation for Food Hoarding in Rats. *Dalbir Bindra, Harvard University.*

An Apparatus and Technique for the Measurement of Gastric Motility in the Rat. *E. Jean Uehren, Johns Hopkins University* (introduced by Stanley B. Williams).

VISION

Chairman: Harold Schlosberg, Brown University

A Cathode-Ray Tube Technique for Investigating Time-Intensity Effects in Vision. *Neil R. Bartlett, Johns Hopkins University* (introduced by Clifford T. Morgan).

Visibility of Signals on a Cathode-Ray Screen when Seen at Different Durations after Fluorescence. *Alex L. Sweet, Johns Hopkins University.*

Dark Adaptation in the Detection of Radar Targets. *R. M. Hanes, Johns Hopkins University* (introduced by Clifford T. Morgan).

Day to Day Variability of Critical Flicker Frequency. *Henry K. Misiak, Fordham University* (introduced by Robert T. Rock, Jr.).

One Use of Reaction Time in a Test of Color Deficiency. *J. D. Reed, Johns Hopkins University.*

Figural After-Effects and the Visual Perception of Size. *W. C. H. Prentice, Johns Hopkins University.*

The Direction of the Assumed Light-Source in the Perception of Ambiguous Relief Patterns. *E. H. Hess, Johns Hopkins University* (introduced by W. C. H. Prentice).

NEW LABORATORY COURSE AT COLUMBIA UNIVERSITY

Chairman: G. R. Wendt, University of Rochester

- A New Type of Introductory Course in Psychology. I. The Plan. *F. S. Keller, W. N. Schoenfeld, J. Volkmann, F. C. Frick, and D. H. Bullock. Columbia University and Mount Holyoke College.*
- A New Type of Introductory Course in Psychology. II. The Apparatus. *F. S. Keller, W. N. Schoenfeld, J. Volkmann, F. C. Frick, and D. H. Bullock. Columbia University and Mount Holyoke College.*
- A New Type of Introductory Course in Psychology. III. Laboratory Results. *F. S. Keller, W. N. Schoenfeld, J. Volkmann, F. C. Frick, and D. H. Bullock. Columbia University and Mount Holyoke College.*

Friday Afternoon

PERSONALITY AND CLINICAL: II

Chairman: Miles S. Murphy, University of Pennsylvania

- Intelligence of Epileptics. A Pattern Analysis of the Bellevue Records of 200 Private Patients. *William G. Lennox, Children's Hospital, Boston, Mass., and A. Louise Collins.*
- Objective Method of Differential Diagnosis of Neuro-psychiatric Veterans. *Louise R. Hewson, Neurological Institute, N. Y.*
- Some Psychological Aspects of Work-Interference Resulting from Physical Disability. *Morton A. Seidensfeld, National Foundation for Infantile Paralysis.*
- Four Appraisals of Vocabulary Knowledge. *Irving Lorge, Teachers College, Columbia University.*
- Clinical Syndromes in Speech and Reading Disorders. *Dorothea A. McCarthy, Fordham University.*

PERSONNEL AND TESTS: II

Chairman: Wallace H. Wulfeck, Federal Advertising Agency

- The Nominating Technique, Its Uses and Limitations. *John G. Jenkins, University of Maryland.*

- Group Opinion as a Predictor of Leadership. *S. B. Williams, Johns Hopkins University.*
- Abbreviated Forms of the Bernreuter Personality Inventory. *Rose G. Andersen, Psychological Corporation.*
- Handwriting in Measurement and Experiment. *Werner Wolff, Bard College.*
- Methodology in Investigations of Span of Attention. *Irving J. Saltzman and W. R. Garner, Johns Hopkins University* (introduced by Clifford T. Morgan).

FILMS

- An Instructional Film for the Fidelity-of-Report Experiment. *Wilbert S. Ray, Trinity College.*
- Examining Personnel for Civilian Employment. *Louise R. Witmer, Civilian Personnel Division, War Department.*
- Films Exhibited by the Psychological Cinema Register, Pennsylvania State College.

AUDITION

Chairman: Edwin B. Newman, Harvard Psycho-Acoustic Laboratory

- Pitch Characteristics of Short Tones: Two Kinds of Pitch Thresholds. *J. M. Doughty and W. G. Garner, Johns Hopkins University* (introduced by Clifford T. Morgan).
- Effect of Frequency Spectrum on Temporal Integration of Energy in the Ear. *W. R. Garner, Johns Hopkins University* (introduced by J. McV. Hunt).
- Further Measurements of the Relation of Pitch to Intensity. *C. T. Morgan and W. R. Garner, Johns Hopkins University.*
- Detection Thresholds and Tonal Thresholds in Auditory Acuity. *J. Donald Harris and C. K. Myers, Sound Laboratory, Medical Research Department, New London Submarine Base.*
- Effects of Noise and Distortion Upon the Relative Intelligibility of Words. *J. C. R. Licklider, Harvard University.*

Friday Evening

PRESIDENTIAL ADDRESS

- The Nature of Psychological "Traits."* ANNE ANASTASI, Fordham University.

ANNUAL BUSINESS MEETING

Saturday Morning

SOCIAL

Chairman: Leo P. Crespi, Princeton University

Ego-involvement as a Factor in Judgment. *Carolyn W. Sherif.*

Objective Differences Among Various Types of Respondents to a Mailed Questionnaire. *Harold A. Edgerton, Ohio State University, Stewart Henderson Britt, McCann-Erickson, Inc., and Ralph D. Norman, Rutgers University.*

What Do the "Don't Know" Replies to Attitude Questions Mean? *S. D. S. Spragg, University of Rochester, A. D. Freiberg, The Psychological Corporation, and P. G. Corby, The Psychological Corporation.*

A Preliminary Study of Individuals' Voting Consistency. *Launor F. Carter, University of Rochester (introduced by S. D. S. Spragg).*

"Defining the Situation"—An Essential Concept for Social Psychology. *S. S. Sargent, Barnard College.*

ROUND-TABLE ON "HUMAN ENGINEERING"

Chairman: Leonard C. Mead, Office of Naval Research

A Program for the Study of Human Motor Abilities. *Judson S. Brown, State University of Iowa.*

Some Interactions between Physical and Human Variables in Equipment Design for Optimal Human Use. *Harry Helson, Bryn Mawr College.*

Studies of Information and Transmission Systems for Human Intelligence. *Alphonse Chapanis, Systems Research.*

The Classical Problem of Span of Apprehension in Relation to Problems of Human Engineering. *Wendell R. Garner, Johns Hopkins University.*

Analysis of Human Tracking Behavior. *Franklin V. Taylor, Naval Research Laboratory.*

Some Human Engineering Problems in Supersonic Flight. *Clifford P. Seitz, Office of Naval Research.*

The Use of Synthetic Devices for the Determination of Machine Constants for Optimal Human Performance. *Malcolm G. Preston, University of Pennsylvania.*

Some Relationships between Studies of Verbal and Motor Skills. *Robert M. Gagne, Connecticut College.*

A Proposed Handbook of Applied Psychological Functions. *John L. Kennedy, Tufts College.*

The Human Factor in Product Design. *John D. Coakley, Psychological Corporation.*

FILMS

Films exhibited by the Psychological Cinema Register, Pennsylvania State College.

ROUND-TABLE ON CERTAIN RECENT STATISTICAL DEVELOPMENTS

(With the cooperation of the Institute of Mathematical Statistics)

Chairman: Bernard F. Riess, Hunter College

Sequential Analysis. *Irving Lorge, Columbia University.*

Staircase Methods. *Phillip J. McCarthy, Princeton University.*

Inefficient Statistics. *Frederick Mosteller, Harvard University.*

Discussion. *Jack W. Dunlap, Psychological Corporation, William E. Kappauf, Jr., Princeton University, Leon Festinger, Massachusetts Institute of Technology, and Joseph Zubin, New York Psychiatric Institute, Columbia University.*

Saturday Afternoon

ADDRESS

"The Body-Mind Problem And Its Bearing Upon Ideological Differences Between the U. S. A. and the U. S. S. R."

By F. S. C. NORTHROP, Sterling Professor of Philosophy and Law in the School of Law of Yale University.

In this address, Dr. Northrop pointed out that an essential connection exists between the international ideological conflicts in economics and politics and the different answers to the body-mind problem proposed in psychology. This occurs because the concept of the political person and the economic man in a given ideology must necessarily be restricted to what the philosophy and psychology of that ideology indicates a man to be. Consequently, different answers to the body-mind problem are accompanied by conflicting economic and political doctrines.

The body-mind problem arose as a consequence of two assumptions of modern physics specified by Galilei and Newton: (I) The distinction between

(a) sensed nature, *i.e.*, sensed qualities in private sensed space and time, and (b) scientifically conceived nature, *i.e.*, material atoms in public mathematical space and time. (II) (a) is related to (b) by a three-termed relation of appearance in which (1) the material non-sensuous atoms in mathematical space and time act upon (2) the observer, to cause the latter to project back (3) the sensed qualities in sensed space and time as mere private appearances.¹

From the latter three-termed relation of appearance, Locke's mental substance can be deduced. It is the kind of entity which can function as the intermediary, second term in the three-termed relation. Were (2) the observer nothing but material substances, as Hobbes and certain recent behavioristic psychologists have suggested, sensed qualities in sensed space and time should not exist, even as appearances. It is with such a person that Locke's political person is identified, from which the *laissez faire* individualism of the traditional Anglo-American ideology in considerable part derives.

Locke's, like Descartes', account of the body-mind relationship broke down for two reasons: (1) It failed to explain how a material substance in space can act upon a mental substance which is not in space; (2) it entailed a theory of ideas which, as Berkeley and Hume showed, renders the notions of material substance and mental substance meaningless. The immediate consequence was the philosophy of Hume, Mill, and Bentham and the psychology of William James^{*} and Titchener in which the person is nothing but the sequence of associated sense data. It is with the sensed pleasures or introspected wants of such a purely empirical, introspected person that the politically good and the economically valuable in British 19th century liberalism and contemporary Austrian and Anglo-American economic science are identified.²

With Feuerbach and Marx the distinction between sensed data and the public external material object is reaffirmed, with the resultant acceptance of thermo-dynamical, physico-chemical, neurological man as the real person. Hence the Marxian

materialism and its thermo-dynamical labor theory of economic value. Hence, also, its fostering of Pavlov's behaviorism.³

None of these traditional solutions of the body-mind problem with their respective social ideologies takes care of all the facts. Hume's, Jevons', James', and Titchener's empiricism accounts for sensed qualities in sensed space and time, but fails to account for physical objects in public mathematical space and time. Marx's and Pavlov's materialism and behaviorism, conversely, account for the latter, while failing to account for the former. Locke and Descartes, who account for both, fail for the other reasons noted above.

How is the problem to be solved? Evidently the error centers in the two assumptions introduced into modern physics by Galilei and Newton which generated the body-mind problem in the first place.

These assumptions are: (I) The distinction between (a) nature as immediately sensed, and (b) nature as conceived in experimentally verified, mathematically formulated theory. (II) Sensed nature (a) is related to theoretically conceived nature (b) by the three-termed relation of appearance.

Analysis of contemporary physics shows that the first of these two assumptions must be retained. If the second assumption is also assumed, Locke's mental substance and all the subsequent inadequate attempts of modern philosophy and psychology to avoid the difficulties of its interaction hypothesis follow. Hence it is the second of the two assumptions introduced by Galilei and Newton which must be rejected.

Independent analysis of the method of mathematical physics confirms this conclusion. In this method, sensed factors are related to theoretical factors, not by the three-termed relation of appearance as Galilei and Newton affirmed, but by the two-termed relation of epistemic correlation.⁴

Forthwith, Hume's, James' and Titchener's empirically given self and nature, and Hobbes', Marx's, Watson's, and Pavlov's theoretically designated, thermo-dynamical, physico-chemical, neurological self are both real, the former no more an appearance than the latter. Forthwith, also, the self is kept within nature, being but a special case of the two-termed correlation between the sensed com-

¹ See Newton's *Principia*, Cajori edition, pp. 6-8, University of California Press, 1934.

² See the writer's *The Meeting of East and West*, Chapters III and IV, New York: Macmillan, 1946. Also Lionel Robbins. *The Nature and Significance of Economic Science*, London: Macmillan, 1935.

³ *Ibid.*, Chapter VI.

⁴ *Ibid.*, Chapter XII.

ponent and the theoretically conceived component of any natural object. Thereby interaction is avoided, and its difficulties are escaped.

Ideologically, this means that classical Anglo-American economic and political doctrine is valid for the sensed component of the person and Marxist behavioristic doctrine for the theoretically known

component of the person. And since no contradiction is involved in the relation of epistemic correlation joining the two components, a new scientifically grounded ideology is at hand in which the traditional values of the U. S. A. and the U. S. S. R. are consistently combined without the limitations of either set of values by itself.

THE SENSIBLE ORGANIZATION OF COURSES IN PSYCHOLOGY¹

DAEL WOLFLE

American Psychological Association

The title of this paper implies correctly that I do not believe that courses in psychology are sensibly organized. We offer our undergraduate students an assortment of courses, but almost never have we planned that assortment to provide a complete and balanced diet of psychological fare. Instead a student has his choice among many courses. There are those which must be given to satisfy a college requirement. There are some given because Professor X considers himself a specialist in the subject matter. There are those which the education department wants given for its students. And there are some which are taught for no very good reason at all. Since Professor X never visits Professor Y's classes, he does not know what Y teaches. The chances are fairly good that both teach much of the same material. They have never gotten together on the fields each should cover.

The title of this paper also implies, and again correctly, that I believe a sensible organization possible. We could examine the whole sweep of what we teach our students. We could plan our courses to minimize the amount of overlap. We could plan them so that one built logically upon another. We could plan them so that after a student had completed five or six of these better-planned courses he would know much more psychology than he does after sitting through five or six courses which bear different titles but which cover much of the same material with essentially the same degree of superficiality.

There is considerable interest among psychologists now in the training of future psychologists. There is a good deal of dissatisfaction with our present teaching. I am taking advantage of that unrest to direct attention to our undergraduate teaching—the place where we attract students into psychology or

where we repel them, the place where we try to give a future psychologist the basic fund of information upon which the graduate school can later build.

I intend to present some figures describing the extent to which the most commonly given undergraduate courses in psychology overlap in content and repeat each other. My analysis is based entirely on textbooks, as it has not been possible to analyze classroom lectures. After demonstrating the amount of overlap, I will try to analyze some of the reasons for it. Finally I will suggest some means by which the overlap might be minimized and our teaching made more effective.

Several years ago Henry (1) published the results of a questionnaire sent to a number of colleges and universities to determine which undergraduate courses in psychology each offered. Recently Sanford (2) made a similar study, partly by examining college catalogues and partly by questionnaire. Sanford's data have not been published, but he has kindly made them available to me. The data from the two studies naturally do not agree in all particulars. I have, however, used both as the basis for selecting a group of ten undergraduate psychology courses which are most frequently given in American colleges, normal schools, junior colleges, and universities. The list, in approximate order of frequency, is shown in Table 1.

I have tried to find the most frequently used textbooks for each of these courses. That was more difficult. I examined Sanford's data and talked to a number of teachers and students from different places and to representatives of several publishing companies. From those sources of information I made up a list of commonly used textbooks, the authors of which are named in Table 1. Whether these texts are the most commonly used in every case is uncertain and not very important.

The textbooks were then analyzed, partly by me and partly by the members of a graduate seminar

¹ Address of the retiring president of the Midwestern Psychological Association delivered at Chicago, Illinois, May 2, 1947.

which I taught at George Washington University. The analyses consisted of a list of the topics discussed in each text and a record of the amount of space devoted to each topic. Before the student analyses

TABLE 1
Ten most commonly offered undergraduate courses in psychology and frequently used texts for each

COURSE	FREQUENTLY USED TEXTBOOKS
Elementary Psychology	Woodworth Ruch Dashiell Munn
Educational Psychology	Gates, Jersild, McConnell and Challman Pressey and Robinson
Child Psychology	Morgan Jersild
Social Psychology	Britt Klineberg Young
Applied Psychology	Berrien Crane Poffenberger Gray
Adolescent Psychology	Cole
Abnormal Psychology	Morgan Maslow and Mittelmann Conklin Dorcus and Shaffer
Mental Hygiene	McKinney Klein
Tests and Measurements	Greene Tiffin Hunt
Personality	Allport Shaffer Young

were started, the students practiced on a common text until they and I could agree on the kinds of topics to list and the fineness of the breakdown of content desired.

I have taken these content analyses and have made several comparisons of them. Different texts

intended for the same course were compared. Texts for use in different courses were compared. Then the several texts for a single course were averaged to produce a kind of hypothetical average textbook. Thus I have combined the elementary texts written by Woodworth, Dashiell, Ruch, and Munn to produce an average elementary text and the educational texts written by Pressey and Robinson and by Gates, Jersild, McConnell, and Challman to produce an average educational psychology text.

Figure 1 shows profiles of these average texts for the five most frequently given undergraduate courses: elementary psychology, educational psychology, child psychology, social psychology, and applied psychology. The same data are presented in Table 2.

Listed at the left-hand side of Figure 1 are some thirty psychological topics. I have arranged these topics arbitrarily, but in an order which puts similar ones together. Wherever a profile drops to zero it means that the average text represented devotes less than half of 1 per cent of its total content to the topic named directly to the left. The scale at the top of each profile is in percentage terms. The profile thus shows the percentage of the total content of one of these hypothetical average texts which is devoted to each of the topics listed. For example, the average introductory text devotes about 4 per cent of its total content to introductory definitions. It devotes zero per cent to descriptions of animal behavior. That does not mean that animal studies are never cited in elementary texts, but that animal behavior as animal behavior is not discussed. About 9 per cent of the average introductory text consists of description and discussion of behavior at birth and the biological development of the individual. The other topics for each of the profiles can be interpreted in the same manner.

It is immediately apparent that the five profiles have some similarities. All five show inclusion of material on numerous topics. In other words, these texts, which were intended for use in five different courses, all treat the same set of topics. The only substantial exception is the fact that about a third of the material in the average applied text does not deal with topics found in the texts for the other four courses. Another way of pointing out the amount of overlap in the content of these five groups of texts

is to say that nine of the thirty-one topics are specifically covered in all five courses, and that twenty-one of the thirty-one are treated in at least three of the courses.

Examination of the profiles shows a number of places in which two or more of the five courses are very much alike. I have marked places to examine particularly by drawing lines across the figure. The top line points out that introductory, educational, and child psychology all give a fair amount of emphasis to the processes of development of the individual. Nine per cent of the average introductory text is devoted to this topic. The average educational psychology text gives it 8 per cent, and the average child psychology text 18 per cent. Social and applied psychology include smaller sections.

The second line is drawn opposite the topic of individual differences. The first three types of texts discuss this topic, giving it, in each case, 8 per cent of the total text content. Thus students who take these three courses get essentially the same material in the same amount of detail in all three courses. If a student also takes applied psychology he finds that 8 per cent of that course is also given over to the study of individual differences, this time with a little more practical slant.

The third line corresponds to the topic of learning. Here the three most common courses give 8, 11, and 6 per cent respectively of their total content to the study of learning. The other two give 2 or 3 per cent. If a student takes all five courses he gets five doses of learning theory and illustrations, but does not know much about learning.

Emotion is the topic indicated by the next line. Six per cent of the average introductory text, 5 per cent of the average educational text, and 10 per cent of the average child text is on the topic of emotion. If the student takes social psychology he gets another dose, this time amounting to 4 per cent of the total. In applied, if the student is still willing to take psychology courses, he gets another tiny dose of emotion amounting to 1 per cent of the course.

The next-to-the-last line is drawn opposite the topic of personality. If a student takes all five of the courses for which profiles are drawn, he gets five treatments of personality, amounting to between 2 and 8 per cent of the total content of the five texts.

The bottom line shows that all five courses discuss

social and cultural factors in development. The amounts range from 1 to 12 per cent.

TABLE 2

Relative emphasis on different psychological topics in 'average' textbooks for five psychology courses

	EL- MEN- TARY	EDUCA- TIONAL	CHILD	SOCIAL	APPLIED
Introduction.....	4%	2%	3%	2%	2%
Animal Behavior.....	0	0	0	4	0
Biological Development.....	9	8	18	1	2
Physiological Psychol- ogy.....	7	0	0	0	1
Sensation.....	7	0	0	0	0
Perception.....	5	0	4	2	0
Attention.....	3	0	0	0	0
Statistics.....	2	0	0	0	0
Individual Differences..	8	8	8	0	1
Personnel Selection....	1	2	0	0	8
Vocational Guidance....	1	0	0	0	2
Group Differences.....	0	0	0	7	2
Learning.....	8	11	6	3	2
Memory.....	4	2	1	1	1
Efficiency in Learning...	2	15	1	0	4
Achievement Measures..	0	10	0	0	0
Thinking.....	5	5	5	0	1
Language.....	1	0	9	2	0
Imagination.....	3	0	1	2	0
Motivation.....	7	1	4	10	2
Emotion.....	6	5	10	4	1
Personality.....	6	2	6	8	3
Mental Hygiene.....	4	7	0	0	9
Disorders.....	2	4	3	5	2
Social Development....	1	4	12	12	3
General Social Psychol- ogy.....	2	5	0	12	0
Attitudes and Morale...	0	4	3	18	2
Attitude Measurement..	1	0	0	2	1
Influencing People.....	0	0	0	7	16
Interests.....	0	4	3	0	1
Efficiency in Work.....	1	0	0	0	12
Other Material.....	0	3	3	0	25

Other similarities could be pointed out. Thinking, for example, is studied in three courses and amounts to 5 per cent of each. Imagination takes up from 1 to 3 per cent of the time in three different

courses. Perception is studied in three courses and takes up from 2 to 5 per cent of each.

Among the introductory texts, Woodworth has twice as much on memory as does Dashiell and three times

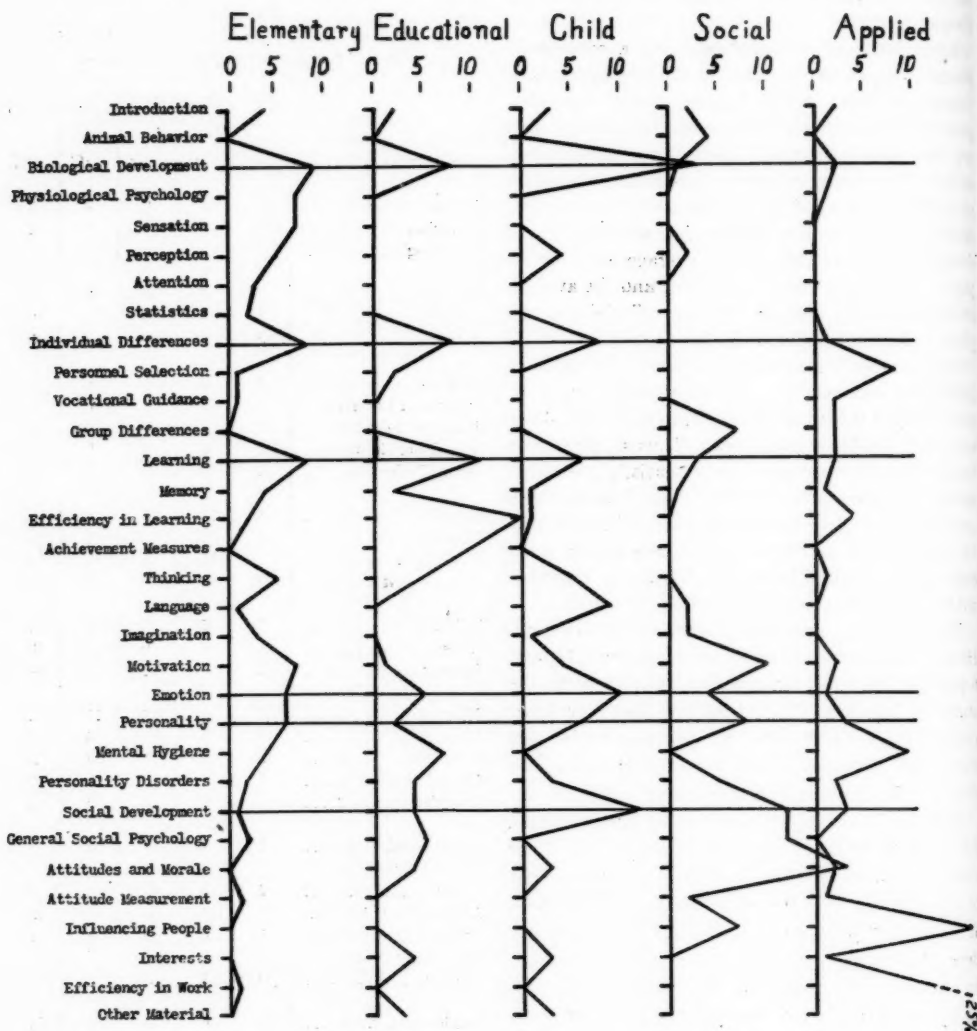


FIG. 1. Relative emphasis on different psychological topics in the 'average' textbooks for the five most frequently given psychology courses. The 'average' textbook in each field was analyzed in terms of the topics listed at the left. The percentage of its content devoted to each topic is shown by the distance of the profile from its base line. The scale at the top of each profile is in terms of percentage of total content.

The differences in the percentages quoted are in many cases no greater than the differences among texts which were written for use in a single course.

as much as Ruch. Ruch devotes a good bit of space to mental hygiene; Munn gives none. Woodworth and Munn emphasize motivation; Ruch and Dashiell

give it only half as much space. Ruch contains a section on vocational guidance; the other three do not. The two educational psychology texts show similar differences. Pressey and Robinson pay much more attention to efficiency in learning than do Gates, Jersild, McConnell and Challman. But these latter authors give a great deal of space to personality, mental hygiene and mental disorders, while Pressey and Robinson give these topics a much shorter discussion.

Our students have long known of the overlap in courses, although they may not be able to give the exact figures. I have heard students say, "That course is easy if you have had Psych 1," and "He gives the same lectures in every course he teaches." The story is told of one faculty member in a large Midwestern university who lectured to a class for three weeks before discovering that he was using his lecture notes for another course not scheduled for that semester. The students, apparently, were too docile or too accustomed to such confusion to complain.

Imagine a student who has studied Ruch's text in elementary psychology and Morgan's in child psychology. He is now taking educational psychology using Gates, Jersild, McConnell and Challman as a text. This program is not an unusual one. His new text contains 805 pages divided into twenty-one chapters. The first chapter of fifteen pages, dealing with the scope of educational psychology, he finds quite new. Following it there is a chapter on the development of behavior, thirty pages, a topic which he has covered in eighteen pages in Ruch and fifty in Morgan. The third chapter deals with physical and motor development, a topic he has covered in greater detail in Morgan. The fourth chapter of forty-one pages is on emotional development. Similar material has been discussed by Ruch for twenty pages and by Morgan for forty-two pages. The fifth chapter is entitled *The development of social behavior*. Its fifty-two pages contain much in common with Morgan's forty-eight-page chapter on *Social development*. The next chapter on mental development is a new organization, but the facts in it are scattered through the previously studied texts. The nature and measurement of intelligence, which he studies next for thirty-one pages, is quite the same material on IQ and MA and the Stanford Binet which he has had for fifty-three pages in Ruch and for forty pages in Morgan.

Thus it goes. Some of the remaining chapters have been dealt with but briefly in the student's previous courses, but will be elaborated more in future ones. For example, the chapter on tests and measurements is a brief summary of a course which he will take later. The only chapter which deals with a topic unique to educational psychology is Chapter 15, *Transfer of training*.

While students have long known of the extent to which our courses overlap and repeat each other, professors have not realized or have not admitted the extent of their sins. In order to emphasize the similarities between some of the courses which usually bear different labels, I have made up a set of simple rules for textbook writers, as follows:

If you wish to write an educational psychology text, start with a good average introductory text. Remove the chapters which deal with the nervous system and sense organs and write three new chapters to use up the space. These three new chapters will have such titles as *Learning in the schoolroom*, *Measuring student progress*, and *Social psychology of the schoolroom*. The first of these new chapters will take care of the fact that the average educational psychology text gives more attention to efficiency in learning than does the average elementary text. The second new chapter will include the material on measurement of achievement that educational psychology texts usually contain. The third will pad out the treatment of social psychology sufficiently to make it agree fairly well with the average educational psychology text.

While you are collecting royalties on your text in educational psychology you will want to write a child psychology text. The rules are easy to follow. Start again with that good average elementary text that provided the basis for your successful text in educational psychology. Again remove the pages on sensation and the nervous system, but leave in those on perception. Take out the little bit of statistics that the introductory text contained. Take out, too, the parts on memory and mental hygiene and cut down the treatment of motivation. Then rewrite two chapters and write two new ones. Rewrite the material on the baby at birth to make it longer and more detailed. Rewrite the chapter on emotion so that it can be called *Emotional development*. The two brand-new chapters can be called *Language development* and *Social development*. *Language development* is new. *Social development* will

be fairly easy since much of the material was already included in the special chapter entitled *Social psychology of the schoolroom* that you had to write for the educational psychology text.

Actually, of course, you will want to make a few more changes than merely writing new chapters. But these are not difficult. As you read over and copy the elementary text used as a starting point, change the wording slightly in a number of places. For example, in writing the educational text be careful to use the word *pupil* instead of the word *subject*. When you write the child psychology text go through it carefully to see that all the *subjects* have been changed to *children*.

It will also help give the new texts a fresh flavor if you change some of the experimental studies used as illustrations. You might, for example, describe a conditioning experiment in which children instead of dogs were used as subjects. It will not, however, be necessary to change many of these illustrations. Most of them are equally at home in texts intended for use in introductory, educational, or child psychology courses.

The final rule is to rearrange the chapters. If intelligence was discussed early in the elementary text, put it near the end of the educational psychology text. If learning was taken up before personality in that book, reverse the order when you write the child psychology. The actual order is unimportant. There is no agreed-upon order for discussing the various topics in any of these fields. The same author has, in fact, pretty much reversed his own order in bringing out a second edition of his text.

These rules are, of course, presented in an ironical vein. I present them, however, as a slightly oversimplified description of the very great amount of overlap that exists in the texts most commonly used in the most frequently given undergraduate psychology courses. I do not recommend following these rules, but examination of the texts leads one to suspect that their authors, consciously or unconsciously, did follow them pretty closely.

In justice to the writers of our texts, I must point out that as one goes down the list of courses most commonly given, one finds a number which depart markedly from the profiles typical of the three courses described in detail. The average social psychology text shows a quite different pattern from those of the first three described. The profile of the

average applied text differs even more. But note that both cover many of the same topics discussed in the other texts. The most original text of the five illustrated in Figure 1, that for applied psychology, has only about a third of its content devoted to topics not included in the average elementary text.

The other five of the ten most frequently given courses can be described more briefly. Profiles of these courses are not presented, partly to avoid complicating Figure 1 and partly because the existence of overlap is sufficiently well demonstrated in the figure as it is.

Only one text in adolescent psychology was examined, that by Cole. In its subject matter it overlaps child psychology texts at a number of places. Every topic except language making up 8 or more per cent of the average child psychology text is also treated in the adolescent psychology text. It also overlaps the texts used in courses in abnormal psychology, personality, and mental hygiene in its emphasis upon social and emotional development, mental hygiene, and personality and its disorders. There is very little material that is unique to this textbook.

The average abnormal psychology text shows far less overlap with those previously mentioned than do the texts for any course discussed so far. It contains some material on physiological and sensory processes, some on learning and memory, and frequently contains a discussion, by now familiar to the student, of differences in intelligence. On the whole, however, the authors of textbooks in abnormal psychology have selected a single set of closely related topics and have devoted their entire texts to the discussion of those topics. Unfortunately, the authors of other texts will not leave the abnormal field alone. The student entering a course in abnormal psychology is likely to have encountered previews in any of the five most frequent courses, in a survey course on fields of psychology, in a course on personality, or in one on mental hygiene.

The texts in mental hygiene overlap to a large extent the material also presented in courses on abnormal, child, educational, and adolescent psychology. Some of them contain material also presented in social psychology courses. On the other hand, some of the applied psychology texts contain chapters on mental hygiene.

The authors of texts on tests and measurements,

like the authors of abnormal psychology texts, have generally selected and adhered to one closely related set of topics. The students, however, have already become partially familiar with that material in courses on educational and applied psychology.

Texts on the psychology of personality differ markedly one from another. An average text, however, shows a great deal of overlap with those intended for use in mental hygiene courses and with those used in child, adolescent, social, and abnormal psychology. In discussing personality development, personality deviations, social influences on personality, and kindred matters, the authors bring in much material common to other courses.

As one goes on to the more specialized and less frequently given courses he is more likely to find them concentrated on a single topic or a few closely related topics. For example, there are courses on statistics, on the psychology of motivation, or on individual mental tests. But overlapping content is by no means limited to the 10 courses which have been named. Courses in experimental psychology, in clinical psychology, in fields of psychology cover much of the same ground that the student has become familiar with in the first 10 courses.

Now the overlap in general topics which is plotted on the five profiles and which I have briefly sketched for other courses does not necessarily mean that the treatment in different texts is identical. The chapters on learning and memory in an introductory text, for example, could differ very greatly from chapters on the same topics in a child psychology text. But frequently, as a matter of fact, they do not differ greatly. Several years ago when we first began to discuss seriously the problem of overlapping course content, Helen Wolffe interested one of her bright students in making a tabulation of the frequency with which specific experimental studies were cited in the texts she had read in different psychology courses. The student went through five texts: Woodworth's *Psychology*, Guilford's *Fields of Psychology*, Morgan's *Child Psychology*, Shaffer's *Psychology of Adjustment*, and Young's *Motivation of Behavior*. The following well-known studies were described in four of these five books: Freeman, Holzinger, and Newman's work on identical twins reared apart; Freeman, Holzinger, and Mitchell's work on foster children; Hartshorne, May, Maller, and Shuttleworth's studies on the development of character; and Pavlov's conditioned

reflex studies. These were covered in three of the five books: The development of intelligence tests by Binet and Simon; Ebbinghaus' work on the curve of forgetting; Cannon's studies of physiological changes in emotion; Hurlock's comparison of different incentives; Jung's introversion-extraversion types; Jung's association tests; Kohler's work on insight in apes; Warden's techniques for measuring the strength of drives; and Watson's experiment on conditioned emotional responses. Many other studies were described in two of the five books, but there is no need to press further the point that if a student takes more than one course in psychology, he is extremely likely to find the second course repeating parts of the first one. In this particular case the student left psychology and graduated with honors a year later as a philosophy major.

I do not know the exact effect of all this repetition on the student. We know as a general principle that repetition aids learning. But we have not demonstrated that repeating the same or nearly the same discussion in two different courses leads to the desired mastery. Students sometimes come upon a section that looks very like material already studied in an earlier course and pass over it with the excuse that they already know it. A slightly different attitude was expressed by a student who worked part time in the APA office. She said one day, with an air of patient understanding of professors' failings, "When you hear a psychology professor tell you something that you didn't know before, it is interesting and you like him. When you hear the same thing later on from other professors, you are just bored." Being bored is not conducive to learning. Deliberate repetition for the sake of emphasis and review may make our students learn their lessons better. The unsystematic and frequently unrecognized repetition that characterizes many of our texts is another matter.

One factor importantly responsible for the overlap in psychology courses is the fact that we have no regular sequence of courses. A related cause is the fact that we offer a number of different types of courses. Each by itself may serve a particular purpose, but these purposes overlap and consequently the contents do also. Let me list some of the types of courses we offer.

1. General survey courses, for example the in-

introductory course and courses describing the different fields of psychology.

2. Courses dealing with some special psychological topic, for example courses on the psychology of learning or social psychology.

3. Courses dealing with some special age group, for example child or adolescent psychology.

4. Courses dealing with psychological methods, for example statistics or experimental psychology.

5. Courses dealing with the application of psychological methods and knowledge to a special group, for example educational psychology and industrial psychology.

6. Courses taught for a special group of students, for example psychology for nurses, or psychology for students of business.

7. Courses dealing with the content of psychology itself, for example history of psychology or systematic psychology.

Partly this variety of different kinds of courses stems from the fact that we have to accommodate different types of students in the same classes. Some students take one or two psychology courses as electives. Some major in another field but are required to take courses in psychology, for example students of education who are required to take educational psychology. Some students have no permanent interest in psychology but nevertheless major in it because they find it interesting, easy, or with classes scheduled at convenient hours. And some major in psychology with the serious intent of becoming psychologists.

If we could segregate students into these four types, and offer different courses for each, the amount of overlap would be greatly diminished. But that is difficult. For one reason, the students themselves frequently do not know in which group they will ultimately belong. For another, present teaching loads sometimes make further subdivision of classes impossible.

I am not at all sure that we can entirely eliminate the kind of overlap I have been discussing. But I am positive that it is desirable for us to try, and that careful planning of all of the courses offered by a department would eliminate a lot of it and would result in better courses than we now teach. Here are some specific suggestions.

1. The first is that all the teachers in a department get together to talk over their course offerings,

to learn what their colleagues are teaching, and to find out how much their courses overlap their colleagues'. Discussions of this kind will almost inevitably lead to better planned teaching.

2. The local situation on a campus may make it necessary to offer some courses which largely overlap other courses. If this is the case, let us recognize the situation for what it is and try to keep the same students from taking largely overlapping courses. If the psychology department has to give a course in educational psychology, or if the education department itself gives that course, and if a course in child psychology must also be offered, then give a student no credit for one if he already has credit for the other.

3. Establish different courses for psychology majors and non-majors to as full an extent as possible. In the past this type of segregation has been extremely difficult, for students did not know about psychology until they came to college and did not decide to be psychology majors until after they had had a few courses in the subject. That situation is gradually changing. A little work in psychology is being given in a slowly increasing number of high schools. Some work in psychology is included in general survey courses given to undergraduate students before they choose a major subject. The number of psychologists in the country and the general awareness of what they do are increasing. The result of these factors is that some high school students now know that they are going to major in psychology when they get to college. During the past year I have had letters from a number of them, asking where they can get the best undergraduate training, and asking what they should take during their undergraduate years in order to have the best preparation for graduate work later on. This month I have appointments to talk with two groups of Washington, D. C., high school seniors who will be starting to college next fall and who are contemplating majoring in psychology. As more and more students know about the field before they come to college, it will be more and more easily possible to plan some courses for psychology majors and others for students with a more casual interest in it.

4. We can, and I believe we should, reorganize the basis on which we decide what courses to offer. Surely seven different types of courses are too many. The most desirable method of reducing that number

would be to make more of our courses deal with special psychological topics. Every one of the five courses shown in Figure 1 devotes some space to the biological development of the individual. Every one gives specific attention to the social development of the individual. Concepts of human development occur in a number of other places throughout these and other courses. It would be quite possible to concentrate this material in a course on human development that would have a distinctive content important for psychology majors and that would be as useful to some other groups as are many of our present courses.

In a similar manner it would be possible to develop courses on learning and memory, on individual differences, on emotion and motivation, on social psychology. Some courses would still have to deal with particular methods useful to the psychologist. For example, a course in statistics would still be desirable. And a general introductory course would have to be given on most campuses. But most of the advanced courses, particularly those intended for psychology majors, could be defined in terms of the topics covered.

5. Once our courses are organized predominantly along the lines of distinctive topics rather than on the many bases now current, it would be possible for us to begin to develop definite sequences of courses; that would, for example, make it possible for the teacher of social psychology to know that every member of his class has already had a course on learning and memory and a course on human development. Knowing that his students have covered these topics, he would not have to start social psychology with a review of all the rest of psychology. Similarly, the teacher of the course on individual differences could know that each of his students has completed a course in statistics and would not have to explain the mean to a heterogeneous group which included some mathematics majors and some who had not heard of an average since they left grade school.

I do not offer these particular courses or sequences

as final. They are meant as illustrations of a possibility that we have largely neglected. Which particular courses should be offered and in what sequence they could best be given is for many teachers on many campuses gradually to determine. It would not even be necessary that the same courses or sequences be given on all campuses. But each department could consider what improvements it could make. I know of no department which could not improve its own offerings by reorganizing its instruction along the general lines I have outlined.

Psychologists, like everyone else, need motivation. Let me therefore conclude with what appear to be the advantages to psychology of widespread, serious, and continued efforts to plan courses that individually would be better organized and collectively would provide a sequence of distinctive courses, each of which would build upon instead of repeating its predecessors.

In the first place, this effort would result in more efficient instruction and more effective learning. It would remove much of the boredom which students now experience in some of our classes and would allow them to learn more in a given number of courses.

In the second place, the more systematic set of courses would, I am confident, appeal to more discriminating students. We get all the best students in our introductory courses. I am not at all certain that we interest our fair share of the best students enough to have them continue in psychology. The future of psychology, of its standing among the sciences, and of the service it renders to society depends primarily upon the caliber of the students who as undergraduates decide that they want to be psychologists. Let us offer them the kind of sensible organization which appeals to better students.

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ON DEFINING PSYCHOLOGY AS A PROFESSION

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SINCE legislation to license psychologists is being considered in some states, attention necessarily turns to a definition of the profession. It is now the responsibility of the psychologist to attempt to define and delimit himself in the applied fields, so that the public, and particularly legislators, may understand what may be encompassed. Also since the law covering each licensed profession is sometimes detailed in a clear-cut pattern of definition and limitation, as in New York State, psychologists must think through a feasible, working definition that will be administrable under the law.

The Connecticut Bill (3) certifying psychologists offers no definition of a psychologist, nor does the Virginia law (8). Both merely posit requirements and standards, namely the Ph.D. degree in psychology and the number of years of experience in the applied fields. Indeed the Mental Hygiene Law of New York State certifying psychologists as examiners in mental deficiency, to sign commitment papers for defectives, (with a psychiatrist), only specifies "A person who shall have had two full years of postgraduate study in psychology at an incorporated university or college and three years of actual clinical experience at the time of his certification as such, shall be and become a certified psychologist (7)."

Defining psychology as a profession gives pause even to a psychologist, in view of the protean forms of applied psychology. A psychologist generally thinks in terms of his own field or specialty or activities. However psychology is more apt to be defined from the viewpoint of what the psychologist does,—perhaps the best method for legislative purposes.

On the basis of replies to a questionnaire of the Office of Psychological Personnel of the National Research Council, a job analysis was recently made of the work performed by psychologists in twenty-eight occupations (10). The occupational descriptions were based on material regarding positions in which 600 psychologists were employed. Aside from educational and research areas in which a number of applied psychologists also work, the chief fields, many overlapping, are the school, clinic, court, child-guid-

ance or other agency such as welfare agencies, (including those for the various types of physically handicapped), institutions for the feeble-minded, the mental, general, or neurological hospital, juvenile correctional or penal institution, and prison. Then there are the industrial or personnel psychologist, public opinion analyst, occupational adviser, vocational counselor, consulting psychologist.

To illustrate the manifold activities of psychologists in a few milieux, some of their duties are summarized as follows:

The public school psychologist administers individual and group tests to school children for purposes of diagnostic and remedial work, determining intelligence level and information relative to personal and social adjustment. Gives various types of intelligence, interest, achievement, aptitude, personality, and other tests, interprets results, and may write up case studies. Reports findings to parents and teachers concerned. May perform or supervise therapy.

Supervises remedial work of special or classroom teachers and gives aid as needed to improve pupils' rate of learning and to facilitate social adjustments.

Confers with parents and teachers with regard to problems of instruction and remedial work. Lectures to groups or confers individually with parents and others concerning psychological problems of pupils.

Interviews pupils concerning adjustment problems. Interviews may be for obtaining information for diagnosis to be used in connection with test results, or for assisting pupils in adjusting themselves to school and other situations (10, p. 565).

The clinical psychologist, among other duties, interviews clients coming to the clinic, administers, scores, interprets individual intelligence, personality, aptitude and other tests to assist in diagnosis of the case; counsels and in some cases gives psychotherapy. Prepares, writes, and reviews case studies; makes reports to staff or referring agency to assist in diagnosis or makes suggestions as to the disposition of the case. At times this involves signing papers committing to institutions (10, p. 566).

In the general or neurological hospital, the psychologist gives all types of individual tests such as personality, performance, intelligence, to patients of various ages to determine special abilities, disabilities, and deterioration. Prescribes treatment on basis of diagnosis, and generally consults or advises disposition of cases, etc. (10, p. 570).

In industry the personnel psychologist develops or directs analysis of jobs, the preparation of job specifications and the development and standardization of selection tests, etc. The personnel technician recruits, interviews, and selects

personnel and may adapt and apply aptitude and trade tests in selection, etc. The occupational analyst studies jobs in plants, describes work performed, analyzes abilities and training required, etc. (10, pp. 574-579).

The duties of the consulting psychologist vary according to his special field. The private consultant may test and interview individual cases who seek assistance or are referred by schools, industry, etc., and may specialize in vocational guidance, remedial work, or psychotherapy (10, p. 575).

The National Roster of Scientific and Specialized Personnel of the War Manpower Commission describes simply though less completely *The job of Psychologist* (9), in much the same manner as the foregoing.

The duties listed under each specialty vary with every situation, nor are specific duties confined to any one specialty for many diverse duties may be included in some situations and fewer in others.

The clinical psychologist considers his own field basically important,—the scientific measurement of abilities and disabilities, of intelligence, of impairment, of emotional stability, of personality generally, then diagnosis and psychological reeducation. Clinical training is indeed the *sine qua non* of psychological practice in all fields.

Major General Paul R. Hawley, Chief Medical Director of the Veterans Administration states: "We consider that the clinical psychologist has three chief functions,—diagnosis, research, and therapy. The diagnosis of personality characteristics will remain the primary task of the psychologist, for his training makes him better qualified than the psychiatrist in this field. We hope our psychologists . . . will employ a wide range of psychological procedure—including intelligence tests, personality inventories, attitude tests, vocational and other types of aptitude tests, projective procedures, and group situational tests such as the psychodrama and work-sampling methods. The psychologist has an armamentarium of wide range for measuring many aspects of human personality and mental disease (2, p. 298)."

When differentiating the fields of clinical psychology and psychiatry, Dr. James G. Miller, Chief, Division of Clinical Psychology, Neuropsychiatric Service, Veterans Administration, points out that during the war, "It became recognized that the diagnostic skills of psychologists and their superior understanding of the principles of normal behavior and how these can be applied to problems of personnel adjustment

were invaluable adjuncts to the medical profession (6, p. 181)". Furthermore:

"Each profession has its characteristic tasks with a vague region of overlapping in some areas. It is probable that a majority of military clinical psychologists carried on psychotherapy in certain types of cases. Almost always this was under the direction of, or in collaboration with, psychiatrists or medical officers who attended to the somatic problems involved, but nevertheless in the military situation, working together as a team, both professions did nearly similar tasks for patients without somatic involvement or serious mental abnormality. This was therapy and it was called 'therapy'—recourse was rarely had to the euphemism 'counseling' . . . It is clear that in the future psychotherapy will be explicitly among the usual tasks of clinical psychologists, but it is essential for the protection of both patients and psychologists that this practice be conducted in the medical framework with no trespassing into fields of surgery, diet, the use of drugs, or similar procedures which are proper precincts for the medical profession (6, p. 182)".

Dr. Miller much as others, enumerates the duties of the clinical psychologist, among which he "conducts psychometric tests and measurements appropriate to a variety of mental and nervous conditions and situations, including tests of intellectual ability, projective tests, examinations of attitudes and aptitudes, group and individual situational procedures. . . . Interprets and reports the above findings in relation to the patient's problems of personality adjustment (5, p. 4)."

Likewise Dr. Karl A. Menninger notes that "the discipline of psychology on the other hand brings to medicine not only that essential *vitamin*, that too long lacking element which it needs, . . . also a tradition of objective measurement, of clearly defined logic, or properly methodological procedure which clinical practice and clinical thinking tend to make us forget and neglect. Traditional psychiatric nosology has finally been forced into open bankruptcy, largely by the penetrating symptomatological analysis made by the psychologists (4, p. 140)."

In the Dictionary of Occupational Titles, the Job Analysis and Information Section, Division of Standards and Research, United States Department of Labor, under the aegis of the United States Employment Service, defines psychology "for use of public

employment officers and related vocational services" as follows:

Studies science of the human mind, its activities, capacities, functions and behavior; applies psychological techniques and facts to fields of human endeavor; studies environment, heredity and conditions leading to the present state of mind; studies delinquency problems; conducts various forms of psychological tests; performs experiments on human beings or animals; analyzes phenomena of human consciousness; applies scientific tests to prospective employees to determine the particular jobs they are best fitted for (1, p. 714).

A clinical psychologist studies patients brought to clinic; observes behavior and appearance, studies family history and advises proper treatment; may give mental tests to patients (1, p. 188).

This information, it is explained, was secured from direct observation for job analysis, augmented by a compilation of occupational data secured from libraries, employers, trade and labor associations, and public employment officers.

These authoritative statements concerning the functions of psychologists are assembled as a foundation for a working definition which should be precise and explicit without limiting the development of psychology as an art and science, also inclusive enough to cover the multiple branches of the profession, yet sufficiently succinct and brief to be included in the law.

With complete recognition of the complexities and pitfalls of the task, it is suggested that if only as a *point de depart* for further consideration, something on this order might be postulated: A person practices

psychology who independently applies the laws and precepts of mental life as experimentally determined in the psychological laboratories, and who employs psychological principles, methods and procedures in the varied fields of human activities without the use of drugs, for the purpose of psychological diagnosis, classification, guidance, measurement, evaluation, re-education, appraisal, analysis, selection, and counseling,—all for better human adjustment.

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Across the Secretary's Desk

THE DETROIT MEETING OF THE APA

The fifty-fifth annual meeting of the APA was crowded: crowded with people, papers, and professional problems. There were two thousand people attending the session. Two hundred of them read papers and at least another two hundred took part in symposia and round table discussions or served as chairmen of sessions.

This was the first meeting for the APA using only hotels. Headquarters were at the Hotel Statler. Sessions were scheduled there and at the Book-Cadillac Hotel. Practically all the members attending lived at one of these or one of the other downtown hotels. Only the film sessions and the evening programs on Wednesday, Thursday, and Friday were held outside the two hotels, at the Rackham Memorial Building, a mile or two away. Hotel meetings were a new experience for the APA, and not entirely a satisfactory one. It was harder to find one's friends when one had to look not only among the hundreds of other psychologists there but also among the hotel's other guests.

There was a good deal of discussion of where to hold future meetings. A campus is the ideal spot in the judgment of most members. But those who ask why we don't meet on campuses forget that organizations, like individuals, must wait for invitations. We are too big for most campuses, and universities generally like to use the September vacation period for repairing their dormitory and dining room facilities and for vacations for their service personnel. Campuses with enough nearby hotels to allow us to live in hotels and meet in university buildings are rare. Resort hotels, which would allow us to get off by ourselves, are usually too small to house all who would attend. Even those that are large enough, for example Sun Valley, are expensive, too far away to use regularly, and do not have enough rooms for scientific sessions. For the next few years we will probably have to meet in city hotels. This year Denver was selected for the 1949 meeting.

Boston was selected a year ago for the 1948 meeting. The Hotel Statler will again be headquarters. The officials of the Detroit Statler were surprised last spring at the number of rooms we wished for meet-

ings; this fall they were surprised at the number of people in those rooms listening to papers.

If the divisions wish it, we can name in advance the hotel at which each division will have its headquarters. That will allow the members who make room reservations far enough ahead of time to choose a hotel in which other members of similar interests are likely to be living.

This year we were fortunate in having a number of distinguished foreign visitors. Professor William Stephenson of Oxford, Professor James Drever, Jr. of the University of Edinburgh, Dr. and Mrs. Jean Paulus of the University of Liège, Professor Mario Ponzo of the University of Rome, Dra. Mercedes Rodrigo of the National University of Colombia, Dr. Loh Seng Tsai of the University of Nanking, and Dr. Stefan Baley of the University of Warsaw all came to this country for the meetings. Several other foreign psychologists who were studying in this country or who have recently come for that purpose were also there: Dr. Mariano Yela-Granizo of the University of Madrid, Dr. Horacio J. A. Rimoldi, Buenos Aires, Dr. Paul H. Schiller of the University of Buda-Pest, and Mr. C. S. Gibb of the University of Sidney, Australia. Several of these guests will remain in the United States for a few weeks to a few months visiting American friends and universities before returning to their home institutions.

Four evenings were used for programs. Tuesday evening the 18 APA divisions held their business meetings and listened to the addresses of the division presidents. Staggering the business meetings so that some started at 7, some at 8, and some at 9 P.M. allowed attendance at more than one, but even so, it was impossible for every member to attend the meeting of every division in which he was interested. At least three divisions did not have a quorum of members present to transact business. The audiences for presidential addresses ranged from nine to several hundred.

On Wednesday night there were four programs: the annual business meeting of the APA Council of Representatives; a gathering of psychologists employed by the Veterans Administration; a public lecture by Dr. Henry Brosin, Chairman of the De-

partment of Psychiatry of the University of Chicago; and a symposium on contributions of psychology to education, with papers by three of the foreign visitors, Drever, Rodrigo, and Stephenson. On Thursday night Carl Rogers gave his presidential address under the title *Some observations on the organization of personality*. On Friday night Mr. Ralph Evans, Superintendent of the Color Control Department of Eastman Kodak Company, gave an address on psychological problems in photography illustrated with a large number of colored slides.

Past meetings have been criticized as consisting too much of short papers on highly specific topics. To counteract this criticism, the lectures on Wednesday and Friday nights were scheduled. They were not well attended. Those who did attend felt embarrassed because of the eminence of the speakers and the smallness of the audience. Meetings of this character will probably be tried again next year, but unless the members wish to attend them, they will not be continued.

The personnel placement service of the APA moved to Detroit for the week to help psychologists wanting jobs and employers wanting psychologists. It was easier to help the first group than the second. Fifty-one persons registered with the office in the hope of finding new positions. Seventy-four employers came to look for psychologists; all but a few of these wrote job descriptions, including range of salaries, which were available to anyone who came in.

The Council of Representatives held its annual business meeting on Wednesday night to elect new committee members and chairmen and to consider the numerous recommendations which had been prepared for it by the Board of Directors, the Policy and Planning Board, and the Association's committees. The full proceedings of the business meeting and reports of APA committees and representatives to other organizations will appear in next month's *American Psychologist*. Here are some of the principal decisions reached.

Dues and club-rate subscriptions to APA journals will be increased the first of 1948. The increases are made necessary by the increased cost of carrying on the many APA activities; the most important of these increases is in printing costs. In 1945 the APA

had a surplus of about \$7000; in 1946 the surplus was less than \$2000; in 1947 we will have a deficit of about \$10,000. In order to balance the 1948 budget the following increases were authorized: dues for Fellows, Associates, and Student Affiliates will all be increased by \$2.50 a year; dues for other classes of Affiliates will be \$4.00 a year; club-rate subscriptions which this year were \$13.00, \$8.00, and \$7.50 will next year be \$20.00, \$12.00, and \$11.00.

A change in procedure affecting members who are late in paying dues was approved by the Board of Directors. In the past, when a member paid late, he received all the journals to which his dues entitled him whether he wanted them or not and without any additional charge. In the future, when he pays late, he will receive the journals only if he asks for them and only if he pays the additional cost of ordering and shipping these journals from the printer.

A problem which the Council discussed at some length but on which decisions were deferred until next September was the question of requirements for election as an Associate member of the APA. The Policy and Planning Board had recommended that the requirement for election as an Associate be increased to the doctor's degree. Representatives decided to discuss that recommendation with their divisions and to be prepared to vote on the proposed change next September.

The Council approved a Policy and Planning Board recommendation that the requirement for election as a Fellow be set at five years of acceptable experience after receiving the doctor's degree. It is now either four years of experience or acceptable published post-doctoral research. That recommendation will be submitted to the APA members for a mail vote next spring.

The Council of Representatives elected Carroll L. Shartle Treasurer of the Association for 1947-1952 and Robert R. Sears and Theodore M. Newcomb as members of the Board of Directors for the period 1947-1950. The members of the APA elected Ernest R. Hilgard President-elect. The new division officers, members of the Council of Representatives, committee members and chairmen, and representatives to other organizations will all be listed in the November *American Psychologist*.—DAEL WOLFE

Psychological Notes and News

DR. RAOUL NIHARD, Professor in the Institut Supérieur de Sciences Pédagogiques of Liège, Belgium, died on July 26, 1947. Professor Nihard was cooperating editor for Belgium and the Netherlands for the *Psychological Abstracts* from 1934 until his death.

If you wish to receive the questionnaire for possible certification by the American Board of Examiners in Professional Psychology, write to the Secretary of the Board: Dr. John G. Darley, 101 Eddy Hall, University of Minnesota, Minneapolis 14, Minnesota. The questionnaires should also be returned to him.

Twelve hundred psychologists had requested certification forms by September, 1947.

MERRILL ROFF has accepted the position at the Minnesota Institute of Child Welfare which became vacant with the retirement of Dr. Florence Goodenough. He was formerly Chief of the Department of Psychology of the School of Aviation Medicine, Randolph Field, Texas.

J. STANLEY GRAY has accepted a position as professor of psychology at the University of Georgia. He was formerly at the University of Denver.

The American University, Washington, D. C. has announced the appointment of SAMUEL ENGLE BURR, JR. as professor and head of the Department of Education in the College of Arts and Sciences. He will serve as the director of the summer session in 1948.

Richardson, Bellows, Henry & Co. announce the appointment of two new members to their staff: HAROLD A. EDGERTON, formerly professor of psychology at the Ohio State University; and ELLIOTT DANZIG, formerly instructor at the University of Pennsylvania.

ALBERT K. KURTZ has joined the faculty of Pennsylvania State College at the rank of professor. During the last year he taught at Michigan State College; previously he was with the Life Insurance Agency Management Association at Hartford.

PAUL E. FIELDS has been appointed professor of psychology at Wabash College, Crawfordsville, Indiana. Previously he was head of the department of psychology at Ohio Wesleyan University.

LOUIS GELLERMANN has been appointed chairman of the new Committee on High Psychological Standards of the Washington State Psychological Association.

JOHN N. STAUFFER, formerly assistant director of the Veterans Guidance Center at Harvard, has accepted a position at Wittenberg College, Springfield, Ohio, as dean of students and assistant professor of psychology.

DORWIN CARTWRIGHT has been appointed director of the Research Center for Group Dynamics at the Massachusetts Institute of Technology.

STANFORD C. ERICKSEN has been made full professor and head of the psychology department at Vanderbilt University.

JESSE B. RHINEHART has resigned his position as assistant professor in charge of the Psychological Clinic at the University of Illinois to become chief psychologist at the VA Mental Hygiene Clinic in Indianapolis. He will supervise the training of students enrolled in the VA clinical psychology training programs at Indiana and Purdue Universities.

On September 1, RUTHERFORD B. PORTER accepted a position as professor of psychology and education and director of the college counseling service at the Northern Michigan College of Education at Marquette, Michigan.

The Roy H. Simmons prize in psychology at Willamette University, Salem, Oregon, for the year 1947-1948 was awarded to SARA ANNE KENNEDY and JAMES GILMORE.

JAMES C. CRUMBAUGH has received an appointment as instructor in psychology at the Memphis

State College, Memphis, Tennessee. He was formerly in the Aviation Psychology Program of the AAF and for the past two years has been connected with Gifford-Hill Pipe Company, Dallas.

FRANCIS J. DEIGNAN has been appointed instructor in psychology at Trinity College. He was formerly vocational appraiser for the VA at Clark University.

VICTOR W. EIMICKE has been appointed psychologist in the Intensive Business Training Program Unit of the Evening and Extension Division, City College, School of Business, New York.

HELEN MARGULIES MEHR is now working as school psychologist at the Bureau of Child Guidance, Board of Education, Brooklyn, New York.

WILLIAM H. HOLLIS, research associate and instructor of industrial accident prevention, Center for Safety Education, New York University and Stevens Institute of Technology, has been appointed Senior Safety Engineer of the Los Alamos Scientific Laboratory.

A number of changes have been made in the staff of the department of psychology of the University of Kansas at Lawrence. The present staff consists of the following members: ROGER G. BARKER, Chairman; HARRIETTE GALANTIERE, FRITZ HEIDER, GRACE M. HEIDER, MILTON W. HOROWITZ, BEULAH M. MORRISON, MARGARET M. RIGGS, JAMES E. SIMPSON, ANTHONY J. SMITH, and HERBERT F. WRIGHT.

The department of psychology of the University of Missouri has announced several staff additions. J. BRADLEY REYNOLDS was appointed assistant professor in February, 1947. New members of the staff for September 1947 are GEORGE WISCHNER, assistant professor; RUTH ALLEE, JEAN ALLARD, and MARTIN DEUTSCH, instructors. ROBERT S. DANIEL is now an associate professor.

The psychology department of Louisiana State University has been enlarged considerably following the appointment of P. T. TESKA as acting chairman. Additions to the staff at the rank of assistant professor include ROBERT DREHER, DAVID HERMAN, and MRS. STANLEY PRESTON.

RALEIGH M. DRAKE will be professor of psychology and head of the department at Kent State University, Ohio. For the past six years he served in the same capacity at Mary Washington College of the University of Virginia. Dr. Drake will succeed D. W. PEARCE who has resigned after being head of the department for 27 years. Dr. Pearce will continue to serve on the staff.

CHARLES N. WINSLOW is joining the staff as an associate professor and director of the Psychological Clinic. He was formerly at Brooklyn College.

CHARLES C. PERKINS, JR., has accepted a position as assistant professor at Kent. He was formerly at Grinnell College.

STEPHEN HABEE has joined the staff of the National Industrial Conference Board. He was previously associated with the Life Insurance Agency Management Association of Hartford, Connecticut.

FRANZ A. FREDENBURGH, formerly assistant to the president of the A. S. Beck Shoe Corporation, has been named dean of the faculty of the Junior College of Commerce, New Haven, Connecticut.

JOHN R. BEERY, professor of education and coordinator of the Guidance Center of the University of Miami, Coral Gables, has been appointed dean of the School of Education.

JEROME SCHIFFER has recently accepted a position as Clinical Psychologist at the VA Mental Hygiene Clinic, North Little Rock, Arkansas. Formerly he was at the University of Kansas.

DOROTHY RETHLINGSHAFFER has joined the staff of the department of psychology of the University of Florida. She was formerly at the Woman's College of the University of North Carolina at Greensboro.

Both of the state universities of Florida have become coeducational institutions. Florida State College for Women has been renamed Florida State University. The University of Florida at Gainesville will retain its former name.

THEODORA M. ABEL, formerly at Letchworth Village, New York State Department of Mental Hygiene, has joined the Research Project on Contemporary Culture at Columbia University, under

the directorship of Ruth Benedict. In addition, she has accepted the appointment of therapist at the New York Consultation Center, 133 East 71st Street, New York 21.

ART A. KRAMISH has been transferred from the Veterans Administration regional office at Cheyenne, Wyoming to the one at Denver.

C. ROBERT PACE has accepted an appointment as Associate Director of the Evaluation Service Center of Syracuse University in charge of research in higher education. His most recent position was at American University; previously he was with the Bureau of Naval Personnel. JAMES W. BROWN will also be an Associate Director of the same center. He will be in charge of audio-visual services. Dr. Brown has been on leave of absence from the State of Virginia where he was director of audio-visual education.

LYLE K. HENRY, formerly Assistant Director of Personnel, University of Kentucky, has resigned to accept a regular Army commission as Major in the Adjutant General's Department. He has been replaced by ROBERT W. HENDERSON, who did his graduate work at Akron University and Western Reserve; he served in the Army as Captain, Adjutant General's Department.

FRANCES E. SCHULZE, formerly at Casements Junior College, Ormond Beach, Florida, has accepted an appointment as instructor at Hobart and William Smith Colleges.

The Pennsylvania Psychological Association held its annual meeting in Harrisburg on May 10, 1947. In the morning session, papers were presented by Lester P. Guest, Harold C. Reppert, and Harry W. Karn. In the afternoon, the following officers were elected: Carroll A. Whitmer, president; Mildred L. Sylvester, president-elect; Harry W. Karn, secretary; and Bruce V. Moore, treasurer. The Executive Committee consists of Robert A. Brotemarkle, Mary I. Elwood, Esther K. Rosen, Morris S. Viteles, Guy E. Buckingham, and Emalyn R. Weiss.

The annual convention of the National Society for Crippled Children and Adults will be held at the LaSalle Hotel, Chicago, November 3-5, 1947. The

program on the first day, Monday, will be on the theme: *The Handicapped—a Great National Resource*; on Tuesday, *Rehabilitation*; and on Wednesday, *Cerebral Palsy*. All interested persons are invited to attend.

The Fourth Governor's Conference on Exceptional Children will be held on Friday, October 24, 1947, at Springfield, Illinois. It is sponsored by the Illinois Commission for Handicapped Children.

The Mid-Eastern Region of the American Association on Mental Deficiency will hold a one-day meeting at the Hotel John Marshall in Richmond, Virginia, on Friday, October 31. Anyone interested in any phase of the problems presented by the mentally deficient is welcome.

A Group for the Advancement of Psychiatry was organized in May 1946 by a number of members of the American Psychiatric Association in an effort to accelerate psychiatric progress. DR. WILLIAM MENNINGER is the chairman, and DR. HENRY BROSN the secretary. The first formal meeting of the GAP was held November 4-6, 1946, in Rye, New York, where the main subject of study and discussion was the problem of psychiatry in medical education. The second meeting, held at Minneapolis June 30-July 2, 1947, was devoted principally to the subject of state mental hospitals.

The American Council on Education is arranging for the establishment of examining centers for the ninth annual administration of its National Teacher Examinations. The ACE welcomes the use of its examinations by any school system or college, provided assurance is given that the examination results will be used wisely in combination with other significant information concerning the prospective teacher.

Arrangements for the establishment of examining centers should be made by superintendents of schools and college officials before November 1, 1947. Address questions to David G. Ryans, Associate Director, National Committee on Teacher Examinations, American Council on Education, 15 Amsterdam Avenue, New York 23, New York.

As was announced in the May AMERICAN PSYCHOLOGIST, the Council of the British Psychological Soci-

ety is publishing a new journal, the *British Journal of Psychology (Statistical Section)* with Professor Sir CYRIL BURT and Professor GODFREY THOMSON as joint editors. Since the Council feels that it would be wise not to issue the *Journal* at regular intervals but when sufficient material has been received to make up one paper-bound issue, the first subscription will not be for a year necessarily, but for the first three or four numbers making a total of about 150 pages. It is hoped that the first issue will appear in the autumn of 1947. Subscriptions for £1, 10s. should be addressed to The Manager, University of London Press, Ltd., Little Paul's House, Warwick Square, London, E. C. 4.

In 1942 the English government appointed an Expert Committee to investigate and appraise the work of psychologists and psychiatrists in the Services and to consider applications to other purposes. The committee consisted of Sir WILSON JAMESON, Chief Medical Officer, Ministry of Health, Chairman; Sir SHELDON DUDLEY, Medical Director-General of the Royal Navy, Sir H. E. WHITTINGHAM, Director-General, Medical Service of the RAF; Sir A. HOOD, Director-General, Army Medical Services; Lord MORAN, Professor F. C. BARTLETT, University of Cambridge; Professor D. K. HENDERSON, University of Edinburgh, Dr. AUBREY J. LEWIS, Clinical Director, Maudsley Hospital, and Professor A. W. WOLTERS, University of Reading. The report of this committee has now been published and is available at the British Information Services, 30 Rockefeller Plaza, New York 20, New York.

The first issue of the *Canadian Journal of Psychology*, the official organ of the Canadian Psychological Association, appeared in March. The editor is JOHN A. LONG, the assistant editor, KATHLEEN M. HOB-DAY, and the consulting editors, MARION MACDON-ALD, J. TUCKMAN, GORDON TURNER, W. H. D. VERNON, and D. C. WILLIAMS.

This journal will take the place of the *Bulletin* which the Association published previously, and will provide a much more adequate medium for the publication in Canada of scholarly and scientific psychological works.

The Federal Security Agency, U. S. Office of Education, Occupational Information and Guidance

Service, Washington, D. C., prints a *Guidance Bibliography* which contains lists of books and pamphlets containing information of value to counselors. It is compiled by CLIFFORD P. FROELICH and WALTER J. GREENLEAF, and may be obtained by writing the above address.

Beginning this fall, Dr. MOLLY HARROWER will edit a publication entitled *An American Lecture Series in Psychology*. At first these monographs will be principally an organ for publications in clinical psychology and manuals of important tests, but the series will be extended in several directions in the coming years. They will be sold at 25 to 50 cents and will run 60 to 100 pages.

The *Journal of Child Psychiatry* is a new journal published by the Child Care Publications, New York. J. LOUISE DESPERT, FREDERIC J. FARNELL, C. M. LOUITT, BERNARD L. PACELLA, and LEO KANNER make up the editorial board. ERNEST HARMS is the managing editor. The journal offers its pages to all workers in the fields of neurology, psychiatry, and clinical psychology as applied to children and in the field of the institutional care of children. At intervals, three or four times a year, the accepted papers will be issued as a section of a more than 400 page volume.

Microfilm Service, a new affiliate of the American Council on Public Affairs, has been established for the purpose of reproducing and distributing microfilm versions of investigations in the physical and social sciences. Scholarly manuscripts on specialized subjects, documents of historical value, and out-of-print studies are being published under their auspices. Copies of these studies are available to leading academic libraries, research institutions, and scholars in general. Further information can be obtained from Microfilm Service, 2153 Florida Avenue, N.W., Washington 8, D. C.

The Illinois Association for Applied Psychology has named the following people to be the ANDREW W. BROWN Memorial Fund Committee: CHESTER W. DARROW, A. R. GILLILAND, MARGARET E. HALL, T. W. HARRELL, AUGUSTA T. JAMESON, FORREST A. KINGSBURY, HELEN L. KOCH, GRACE MUNSON, DOROTHY C. PAGE, FRANCES C. PERCE, MARTIN L.

REYMERT, PERRY ROHRER, PAUL SCHROEDER, DAVID SHAKOW, AGNES A. SHARP, L. L. THURSTONE and THELMA G. THURSTONE, with RICHARD M. PAGE as chairman. They will assist in establishing a suitable memorial to the contributions made by the late Dr. Brown to psychology as a profession. The present plan is to establish a student loan fund to aid graduate students in clinical psychology to continue their studies.

You are invited to send your contributions now to the chairman of the committee.

C. R. WILLIAMS has accepted an appointment as a member of the Board of Directors of the Music Research Foundation, Inc., a non-profit organization whose purpose is to study the use of music in the treatment of disease. They propose to initiate a program of scientific inquiry into the therapeutic use of music. Selected psychiatrists will conduct investigations into the kind of music which has most therapeutic value and the types of mental patient most responsive to its use. Through the use of fellowships, the Music Research Foundation will conduct and initiate special psychological studies. In addition, it will establish grants to compile present knowledge of the subject. The Executive Secretary of Music Research Foundation is located at 2909 Stanton Avenue, Silver Spring, Maryland.

The University of Virginia Hospital has a vacancy for a psychologist as assistant in a child guidance center. The salary ranges from \$2832 to \$3638.40. The requirements are an MA and some experience in child guidance clinic work. Address applications to Miss Linda L. Carter, Department of Neurology and Psychiatry, University of Virginia Hospital, University, Virginia.

A staff position in the Des Moines Child Guidance Center is open for a clinical psychologist. In addition to the conventional duties and requirements, experience in projective techniques and play therapy would be desirable. The salary is \$3,000. Applications should be addressed to Allan H. Frankle, Di-

rector, Des Moines Child Guidance Center, Des Moines 8, Iowa.

A Senior Psychologist is desired to work in connection with the spastic children's program in the State of Washington. Located in Seattle, the psychologist will work under the medical supervision of the State Department of Health. Salary for this position ranges from \$2880-\$3420. The requirements for the position include an MA and two years of paid employment in clinical psychology. For further information, write the Washington State Personnel Board, 1209 Smith Tower, Seattle 4, Washington.

The Psychological Clinic of the University of Hawaii has an opening for a male psychologist, working largely with criminals and psychiatric cases. Depending on qualification, the appointments may be made as psychologist, salary range \$4,980-\$6,180; associate psychologist, \$4,340-\$5,280; or assistant psychologist, \$3,780-\$4,720, plus in each case a monthly bonus of \$48.

Interested persons should write Dr. C. J. Herrick, Psychological Clinic, University of Hawaii, P. O. Box 18, Honolulu 10, T. H.

The Long Beach Mental Hygiene Clinic announces a vacancy for the position of clinical psychologist, preferably beginning in November. The salary is \$3600 a year. Both adults and children are served by this agency, which is a member of the Community Chest. Interested psychologists should write Dr. John A. Russell, Director.

The Psychiatric Division of Kings County Hospital has vacancies for six more Staff Psychologists on its staff of twenty. Internships will be available in February and September of 1948; the existing vacancies are for positions at \$3050 without maintenance and require two years of graduate study and three years of clinical experience. The positions are under psychiatric direction. Inquiries should be addressed to Dr. Solomon Machover, Chief Psychologist, Psychiatric Division, Kings County Hospital, Albany Avenue and Winthrop Street, Brooklyn 3, New York.

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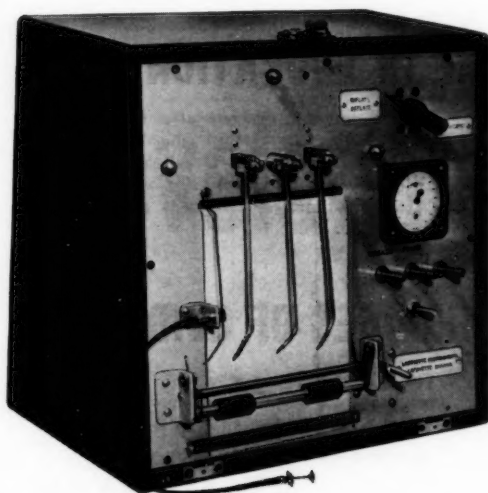
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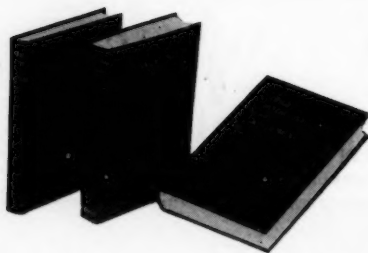
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